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**Hittite Hieroglyphs and Luwian:
New evidence for the connection**

Von

**J. D. Hawkins — Anna Morpurgo-Davies —
Günter Neumann**



VANDENHOECK & RUPRECHT IN GÖTTINGEN

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J. D. HAWKINS — ANNA MORPURGO-DAVIES
GÜNTER NEUMANN

**Hittite Hieroglyphs and Luwian:
New evidence for the connection**



VANDENHOECK & RUPRECHT IN GÖTTINGEN

Vorgelegt von Herrn G. Neumann in der Sitzung vom 26. Oktober 1973
6/1973

Piero Meriggi,
dem Pionier vieler Entzifferungen,
in herzlicher Verehrung gewidmet

Gesamtherstellung: Hubert & Co., Göttingen

1.1. From about 1870 in North Syria, and more particularly in the South Anatolian provinces of Cappadocia, Cilicia, Lycaonia, Cataonia and Comma-gene, stone monuments with a hitherto unknown script began to emerge. Scholars followed A. H. Sayce in calling the signs of this script 'Hittite Hieroglyphs', a term which somewhat hypothetically connected the newly found epigraphic remains with the Hittite people who were already known from the Old Testament and the Assyrian cuneiform records. This designation has won general acceptance and in what follows we shall maintain it, though we shall

Preliminary Note. Something should be said about the origin of this joint paper. At the Royal Asiatic Society's Sesquicentenary Symposium on 'The Undeciphered Languages', held in London from the 25th to the 27th of July 1973, G. Neumann read a paper entitled 'Neue Lesungen im Hieroglyphisch-Hethitischem' and immediately afterwards J. D. Hawkins and Anna Morpurgo-Davies offered a joint paper with the title 'Hieroglyphic Hittite and Luwian: some new readings and their consequences'. Since the conclusions of the two works overlapped to a large extent and the remaining differences were resolved in subsequent discussion, it seemed desirable that the authors should combine to set out in print their views on the subject: the present paper is the result of their collaboration. The authors would like to express their gratitude to Professor O. R. Gurney for the patience and thoroughness with which he read the successive drafts of their manuscript.

Owing to the different scholarly backgrounds and nationalities of the authors the first problem that arose in the drafting was to find a satisfactory and generally acceptable method of transliteration. For the transcription of those logograms whose value is clear we propose to employ Latin words in capitals instead of the Sumerian/French/German/English words normally used. Abbreviations will not be used except that in the case of the sign which introduces the relative pronoun: we shall transcribe it as REL. At present there is no fully agreed system of transliteration for the syllabic signs; the new values proposed for some of them in this paper will introduce a further element of complication. For the sake of intelligibility and easy reference we shall use the system adopted by E. Laroche in "*Les hiéroglyphes hittites. Première partie: L'écriture*" (Paris 1960) (henceforth *HH*), with the modifications indicated in Table I, cf. p. [50]. We shall indicate with an obelos (†) those transcriptions which we quote from other authors but do not ourselves accept. It is very much to be hoped that both for the logograms and the syllabograms an international convention of transliteration may soon be adopted.

We have used the same abbreviations as those used in Laroche, *HH*, and in E. Laroche, *Les noms des Hittites* (Paris 1966) [*Noms*]. In addition notice:

Donner and Röllig, *KAI*² = H. Donner, W. Röllig, *Kanaanäische und Aramäische Inschriften*, 3 vols. (Wiesbaden 1964²).

Handbuch = *Handbuch der Orientalistik* II 2: *Altkeleinasische Sprachen* (Leiden 1969).

Laroche, *DLL* = E. Laroche, *Dictionnaire de la langue louvite* (Paris 1959).

Meriggi, *Glossar* = P. Meriggi, *Hieroglyphisch-Hethitisches Glossar* (Wiesbaden 1962²).

Meriggi, *Manuale* = P. Meriggi, *Manuale di eteo geroglifico*, 2 vols. (Rome 1966, 1967).

Parpola, *N-AT* = S. Parpola, *Neo-Assyrian Toponyms* (AOAT 6; Neukirchen-Vluyn, 1970).

restrict it to the *script* itself, since we agree with Bittel¹ in making a clear distinction between the archaeological-cultural use of the term 'Hittite' and the purely linguistic use. The characterization of the hieroglyphic script as 'Hittite' is justified, since we now know that in its rudimentary form it was already in use in the Hittite Empire (from c. 1600 B.C. onwards) at the capital Hattusa. However, for the *language* which is used in the overwhelming majority of the Hieroglyphic inscriptions of the 1st millennium B.C. we shall use the term 'Hieroglyphic Luwian', as was suggested by Meriggi as early as 1932². The early attestations of the script from the 2nd millennium B.C. consist mainly of personal names on seals written partly logographically and partly phonetically; in this paper we shall be concerned less with them than with the fully developed script as we find it from the tenth to the eighth centuries B.C. By this period the scribes had learnt to write case endings of nouns, personal endings of verbs, the particle chains at the beginning of sentences, and in general had moved from a logographic form of writing towards an increasingly syllabic script. At this stage the modern investigator may for the first time pronounce on the inflectional system, the syntax and the lexicon of the language.

1.2. How did it become possible to decipher this script, and what were the arguments that led the decipherers of the late nineteenth and early twentieth centuries to their first results? We need not proceed in chronological order: the history of the decipherment has already been written by Johannes Friedrich³. In what follows our only concern is to exemplify the different methods and deductions which led to an understanding of the script. A few points had to be established at the outset: the direction of writing, the logographic, syllabic or alphabetic nature of the script, the presence or absence of particular signs meant to distinguish phrases, words, proper names or even logograms from other signs. Some of these problems were soon solved: the script proved to be a logographic-syllabic one, which included determinatives; the direction of writing alternated from line to line. However, not all the basic questions were examined with the necessary clarity right at the beginning of the decipherment; some were not posed and answered until Meriggi did so in 1930⁴. To these basic preliminary studies belonged also the problem of deciding whether similar signs were simple graphic variants with the same value and a more or less cursive shape, or actually different signs with different values.

1.3. It always seemed probable that this script must have had a number of syllabograms as well as the recognized logograms. Here the contemporary

¹ *Historia* 1 (1950), 267ff.

² *RHA* II/9 (1932), 55 n. 60a: "louvien hiéroglyphique".

³ *Entzifferungsgeschichte der hethitischen Hieroglyphenschrift* (Stuttgart 1939); also *Entzifferung verschollener Schriften und Sprachen* (Berlin 1954).

⁴ In his 'Vorstudie' (*ZA* NF 5 [1930], 165ff.).

Assyrian sources proved useful, for they included a whole series of royal and place names from the land of Hatti. In some favourable cases these names could be identified in the hieroglyphic inscriptions. Thus Campbell Thompson recognized in the first three signs of Fig. 1

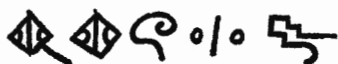


Fig. 1

the place name Gurgum of the Assyrian records⁵. Similarly the name *kar-ka-mi-sa* was located in the inscriptions of Kargamis. Though this method produced good results, it had its limitations, since the Assyrians in their writings naturally assimilated to a greater or lesser degree the restricted number of Anatolian names to their own language. Thus neither Hieroglyphic Luwian case endings, nor in general any inflectional element could be recovered in this way.

1.4. Other methods provided the key to the syntactical structure of the inscriptions. We may quote three examples. Meriggi recognized the words for 'son' and 'grandson'⁶, which were both written with the same logogram (or perhaps determinative). In this way he revealed the series of appositional phrases contained in the genealogical statements with which the kings, in the pride of their ancestry, identified themselves. Secondly, Forrer discovered the so-called 'curse-formulae' which occurred at the end of many of the inscriptions — "whosoever does such and such (e.g. damages this structure), whether he be a king or a lord . . . him may the gods punish". This discovery made it possible to identify not only the logogram for the relative pronoun, but also the imperative forms of the verb (formally identical in the singular and in the plural) and the disjunctive particles *man* . . . *maⁿ(pawa)* . . . (*sive* . . . *sive* . . .). This was a remarkable step forward, and one which made possible a further comparative observation. In the curse-formulae the ending of the verb in the main clause (i. e. the imperatives mentioned above) was indicated by the syllabogram 𐎶 (HH no. 89); since the *tu* value of this sign was assured by its occurrence in the place name *tu-wa/i-nu-(wa/i-ni-)* (= Classical Tyana), there emerged one of the first links of the new language with the Hittite-Luwian languages (the Anatolian group)⁷. Even more instructive is the third example.

⁵ R. Campbell Thompson, *A new decipherment of the Hittite Hieroglyphs* (Oxford 1913), 30ff. His reading was not entirely accurate, since he read *gu-gu-am-* where we would now read *ku-ra/i-ku-ma-(wa/i-ni-)*.

⁶ ZA NF 5 (1930), 199ff.

⁷ E. Forrer, *Die hethitische Bilderschrift* (Chicago 1932), 37. Forrer drew the comparison directly with Hittite ("Kanisisch" to him) since no Luwian imperatives in *-tu* were yet known to him.

Forrer recognized, as had Sayce before him, an enclitic conjunction 'and' (= *-que*) in the sign 𐎧 (*HH* no. 215), but he went a step further and gave it the syllabic value *ha* because he had correctly identified the kinship term, Fig. 2



Fig. 2

(*há + ra/i-tu-sa*) with the Hittite *hardu-* 'descendant'⁸. Yet the sign also appeared as the ending of the 1st person singular preterite active of the verb, and thereby offered a clear link between the language of the hieroglyphs and Cuneiform Luwian. Forms such as *a-ú-i-ha* 'I came', *pa-a-ši-ha-aḫ-ha* 'I crushed' etc. are Luwian, while Hittite has an ending *-(n)un/-hun*.

1.5. Around 1930 there appeared at short intervals several articles, reviews and books by Meriggi⁹, Bossert's *Šantaš und Kupapa*, Forrer's *Heth. Bilderschrift*, cited above, and Gelb's *Hittite Hieroglyphs* I and II¹⁰. By the beginning of the Second World War the joint efforts of Meriggi, Bossert, and Gelb, together with the supporting work of Hrozný, and the mutual corroboration, stimulation and corrections that they provided, had yielded agreement on the syllabic values of a basic stock of some 55 signs and on the meanings of many logograms and determinatives. However, the suggested translations of whole sentences still contradicted each other to a large extent.

1.6. The role played by the Assyrian documentary sources in the first phase of the decipherment was gradually assumed by Cuneiform Hittite texts. In his two definitive volumes *SBo* I and II Güterbock succeeded in identifying, on the seals of the Empire period found at Boğazköy, some of the already known names of Hittite kings and queens; and by this method he secured further syllabic values. This line of research was extended by Laroche to the Ras Shamra seals with very fruitful results¹¹. The seals provided readings which were partly 'digraphic' (i.e. the personal names were written both in cuneiform and in hieroglyphic) and partly purely hieroglyphic. However, even in the latter cases the text of the sealed tablets often yielded the cuneiform version of the name of the seal's owner.

1.7. The year 1946 brought Bossert's discovery of the Karatepe bilingual in East Cilicia, and for the first time a substantial text in a known language, Phoenician, was made available together with its Hieroglyphic Luwian counter-

⁸ Ibid., 28.

⁹ Cf. especially P. Meriggi, *RHA* II/9 (1932), 1-57; *ibid.* II/11 (1933), 105-119; *OLZ* 36 (1933), 73-85; *WZKM* 40 (1933), 233-280; *ibid.* 41 (1934), 1-42; *Die längsten Bauinschriften in „hethitischen“ Hieroglyphen nebst Glossar zu sämtlichen Texten* (Leipzig 1934) (= *MVAeG* 39, 1).

¹⁰ H. Bossert, *Šantaš und Kupapa* (Leipzig 1932) = *MAOG* VI 3; I. J. Gelb, *Hittite Hieroglyphs I-II* (Chicago 1931-1935), and subsequently *III* (Chicago 1942).

¹¹ *Ugaritica III* (Paris 1956), 97-160.

part. The Phoenician text appeared in three versions, while the Hieroglyphic Luwian text was written in two versions which showed some graphic divergences. It seems likely that the inscription belongs to the late eighth century B.C. In the years that followed, a number of scholars besides Bossert examined the implications of this discovery for the decipherment, among them Barnett, Friedrich, Gelb, Alp, Güterbock and Meriggi¹². They correctly emphasized that KARATEPE had confirmed many semantic and phonetic interpretations which at the time were still hypothetical, and they also pointed out that the new inscription yielded a number of new syllabic values and of new meanings of words and logograms. Yet, surprisingly, the bilingual did not seem to have the converse effect: it did not act as an inducement either to correct or to discard completely any of the views previously held about, for instance, the values of the syllabic signs.

1.8.1. The early 1960's saw the appearance of two substantial compendia of the knowledge of the script up to that date. Laroche published the first part ('*L'écriture*') of his work '*Les hiéroglyphes hittites*' (1960), in which he registered the most important occurrences of each of the 497 signs which he listed, and, where possible, defined the phonetic values, briefly noting who had first read the relevant signs. The book, which is outstanding in its clarity, also incorporates many original results of Laroche's own research. A second part was announced, which will contain transliteration, translation and commentary on the most important texts, as well as a grammar of the Hieroglyphic Luwian language and an attempt to determine its position within the Anatolian branch of Indo-European. Meanwhile, Meriggi published in 1962 an entirely revised version of his Glossar of 1934, which for each entry gave a complete grammatical analysis, indicating number, gender and case of nouns, tense and person of verbs etc. Of his '*Manuale di eteo geroglifico*', the '*Grammatica*' (1966) and the first volume of the '*Testi neo-etei più o meno completi*' (1967) have appeared to date; the second volume of the text edition is now complete in manuscript form.

1.8.2. The agreement between Laroche's and Meriggi's standard works, which are now indispensable to any student of this field, is extensive but not complete. In allocating phonetic values to the syllabograms there is a large amount of consensus, though there are divergences both in the distinction of homophones (by diacritical marks or by numbers), and in the numbering of

¹² Bossert's editions of KARATEPE are listed e.g. in Laroche *HH*, p. xxv; cf. also H. G. Güterbock, *Die Bedeutung der Bilinguen vom Karatepe für die Entzifferung der hethitischen Hieroglyphen*, *Eranos* 47 (1949), 93-115; I. J. Gelb, *The contribution of the new Cilician bilinguals to the decipherment of Hieroglyphic Hittite*, *Bi. Or.* 7 (1950), 129-141; P. Meriggi, *La bilingue di Karatepe in Cananeo e geroglifici etei*, *Athenaeum* 29 (1951) 25-99; R. D. Barnett, *Karatepe, the key to the Hittite Hieroglyphs*, *An. St.* 3 (1953), 53-95; S. Alp, *Zur Lesung von manchen Personennamen*, 1950; J. Friedrich, *Zur Lesung der hethitischen Bilderschrift*, *Ar. Or.* 21 (1953), 114-139.

individual signs. Nevertheless it is also apparent that the process of decipherment cannot yet be considered as completed. We do not yet know, for instance, the syllabic or logographic values of the rarer signs, which may often turn out to be individual or local variants. As far as the writing system goes, often there is no agreement about the vocalic values of the consonantal signs; is it possible to attribute to some signs a double or even a triple vocalization (*Ca/i* or *Ca/i/u*) or should we assume that normally each sign has only one vocalization (i.e. either *Ca* or *Ci* or *Cu*)? At present we are not able to establish for the hieroglyphic script a syllabic grid constructed with the strict logic of that of Linear B or of the Cypriote syllabary. Many consonantal series such as *ya*, (*yi*), *yu* and *za*, *zi*, *zu* appear to be completely lacking¹³. For these and other individual problems, all too often it remains unclear whether the unevenness depends on a lack of systematic organization in the script itself or on the inadequacy of the modern decipherment.

1.9.1. Even in the case of some of the most common signs, an assured syllabic value has not yet been successfully determined. Already Peiser had supposed that the signs Π \sqcup \uparrow \updownarrow were vowels on account of their very frequent occurrence¹⁴; the double stroke at the foot of the signs he took as a mark of vowel length. Meriggi took over this suggestion of Peiser¹⁵, and, supported by his authority, the readings $\Pi = a$, $\sqcup = \bar{a}$, $\uparrow = i$, $\updownarrow = \bar{i}$ gained acceptance. At the same time, however, other suggestions for the reading of these signs were offered. Jensen, for example, wished to read Π as *i* and \uparrow as *a*¹⁶, while Cowley had $\Pi = i$ and $\sqcup = \bar{i}e$ (besides $\cdot\uparrow = a$, $\uparrow = u$ and $\updownarrow = \bar{u}e$)¹⁷. Forrer suggested for Π the reading *e* or *\bar{a}* from its appearance as the first syllable of the place name Hamath¹⁸. It is notable that all these older suggestions, which were often no more than tentative guesses, hovered round vocalic values for the signs Π \sqcup \uparrow \updownarrow . Only Bossert suggested a consonantal value *t* for \uparrow \updownarrow ¹⁹, but he subsequently abandoned this in favour of Meriggi's values.

1.9.2. Gelb's suggestion that the double stroke indicates vocalic nasalization rather than vocalic length²⁰ can count as a modification of Meriggi's

¹³ Against this Gelb (*HH* III, 22) postulated a complete *z*-series of four syllabograms (*za*, *ze*, *zi*, *zu*). The details of his argument have not won acceptance, but a *z*-series is intrinsically probable, for not only do the languages written in cuneiform (both Hittite and Luwian) have many words with *z*, but so also does the alphabetic Lycian as well as the proper names from Cilicia, Cappadocia, and Isauria written in Greek alphabet. Laroche (*HH*, no. 432) has one syllabogram with the value *zu*: see below 4.3.2., n. 129.

¹⁴ F. E. Peiser, *Die hethitischen Inschriften* (Berlin 1892), 18f.

¹⁵ *ZA* NF 5 (1930), 184ff.

¹⁶ Cf. e.g. P. Jensen, *Zur Entzifferung der 'hittitischen' Hieroglypheninschriften* (Berlin und Leipzig 1925), 44ff.

¹⁷ A. E. Cowley, *The date of the Hittite Hieroglyphic inscriptions of Carchemish*, *Proceedings of the British Academy* 14 (1928), 39ff.

¹⁸ *Heth. Bilderschrift*, 24.

¹⁹ *Šantaš und Kupapa*, 48.

²⁰ *HH* II, 9–12.

proposals. There is little doubt that Gelb was right in rejecting the vowel length theory, but he erred in assuming that before a homorganic consonant the nasalization of the preceding vowel should always be indicated in writing. Friedrich specifically pointed out that the values *i* and *ī* were not supported by KARATEPE²¹, while Laroche cautiously observed apropos of 𐎎 "Marque par opposition à "a" une différenciation phon. encore indécise", and added, "La transcription \bar{a} n'a donc, provisoirement, qu'une valeur conventionnelle"²². For 𐎎 he employed a corresponding formula. In fact such a coexistence of signs for long and short vowels has no parallel either in the cuneiform syllabaries or in Linear B or Cypriot.

1.10.1. Besides the two great compendia by Meriggi and Laroche, a number of smaller contributions have carried research still further. Admittedly we do not have as yet a definitive edition of the Karatepe bilingual, but Bossert made most of this text available in his preliminary publication and also discovered and published other Hieroglyphic Luwian inscriptions. In his two last articles, posthumously published in 1960—61, he also suggested the values *zi* and *za* for the signs 𐎎 𐎎 , which had previously been read as *i* and *ī*; he proceeded further to speculate about the exact value of 𐎎 (normally read as *a*)²³. However, since his arguments were not all equally judicious, his suggestions did not find general acceptance. In what follows we shall have occasion to reconsider Bossert's values and we hope to be able to demonstrate in greater detail than was possible to him the validity of the equations $\text{𐎎} = zi$, $\text{𐎎} = za$.

1.10.2. In his 1961 dissertation and in some important articles subsequently published the Austrian scholar, Hermann Mittelberger, reconsidered the vocalization of certain syllabograms and, thanks to his new interpretations, was able to show that the language of the hieroglyphic inscriptions could be brought somewhat closer to Cun. Luwian than it had hitherto been imagined²⁴. The most important among the new values established by Mittelberger are listed in the following table (Fig. 3):

| | Meriggi | Laroche | Mittelberger |
|------------|---------------|------------------------------------|--------------|
| 𐎎 | 388 <i>na</i> | 411 <i>nā, -n₃, nī?</i> | <i>nī</i> |
| 𐎎 | 203 <i>nā</i> | 214 <i>nā</i> | <i>nī</i> |
| 𐎎 | 174 <i>sa</i> | 174 <i>sā</i> | <i>sī</i> |

Fig. 3

²¹ *Ar. Or.* 21 (1953), 120.

²² *HH*, 115–116, 200f.

²³ H. Th. Bossert, *Ist die B-L Schrift im wesentlichen entziffert?*, *Orientalia* 29 (1960), 423–442; *ibid.*, 30 (1961), 110–118; *Zur Vokalisation des Luwischen*, *ibid.*, 30 (1961), 314–322.

²⁴ H. Mittelberger, *Studien zur Laut- und Formenlehre des Hieroglyphen-Hethitischen*, Diss. Vienna 1961 (typewritten). Cf. also his review of Laroche in *Die Sprache* 8 (1962), 276–286; *Bemerkungen zu Meriggis hieroglyphisch-hethitischem Glossar*, *ibid.* 9 (1963),

However, Mittelberger found that in spite of these new readings the differences between the language which emerged from the transcription of the hieroglyphic texts and that of Cun. Luwian were still so great, that he was even induced to doubt the validity of the use of the name 'Luwian' for what used to be called Hieroglyphic Hittite.

1.10.3. Before concluding this historical summary we must mention yet another suggestion. We have seen above the difficulties which arose apropos of the signs \uparrow \updownarrow \parallel \sqcup . We owe to Mittelberger and to Kalaç²⁵ the suggestion that \sqcup be read as *ya*. They both noticed that this reading would bring the language of the Hieroglyphs nearer to the other Luwian languages. In Cun. Luwian there are datives such as *Hattušaya*, *ulanteya*, *lulahiya*. These have an exact equivalent in the Lycian datives of the type *Mañmahaje*, *Plezzijeheje*, *Ṁmije*. Thanks to Mittelberger's and Kalaç's suggestions we acquire in Hieroglyphic Luwian datives such as *ka-ka-ia*, DEUS *ku-AVIS-pa-pa-ia* (-a-stems), *mu-ti-ia* (-i-stem), *ka-na-pu-ia* (-u-stem) etc. Another example may be in order: Kalaç (op. cit. 329) has already shown that the hieroglyphic verb PES REL-*ia-ta*, i.e. *?hu(i)yanta* 'they run', corresponds exactly to the Luwian stem *huyia-* 'to run'²⁶.

1.11. What precedes is probably sufficient to prove how many doubtful points still remain in our understanding of the writing system of Hieroglyphic Luwian, in spite of the enormous progress made in the work of decipherment in the course of this century. This paper intends to tackle some of these points, and it will concentrate on the signs \uparrow \updownarrow \parallel \sqcup , about whose values, as we have seen, complete agreement has not yet been reached. It is hardly necessary to stress that the frequency and distribution of these signs make it likely that whatever conclusion is reached about their values will have deep repercussions on our views about the grammar of Hieroglyphic Luwian.

2.1. The decipherment of Hieroglyphic has, as we have seen (above 1.2-3), proceeded along two main lines: first the identification of the logograms, and second, much more important since it is our only means of entry into the language, the allocation of phonetic values to the syllabograms. (A third line, still very incomplete, is the determination of the phonetic spellings of the logograms). The syllabograms have received their phonetic values from the establishment of equivalents or correspondences, drawn largely from cuneiform, but also occasionally alphabetic sources²⁷. That is, as soon as the identity

68-107; *Zur Schreibung und Lautung des Hieroglyphenhethitischen*, ibid. 10 (1964), 50-98; these contain the substance of the points made in the dissertation.

²⁵ Cf. Mittelberger, *Die Sprache* 10 (1964), 83; M. Kalaç, *Belleten* 32 (1968), 327ff.

²⁶ The evidence for the value *ia* has now been collected and discussed by G. Neumann, *Festschrift H. Otten* (Wiesbaden 1973), 243-251.

²⁷ Cf. Laroche, *HH*, p. 257.

of cuneiform and hieroglyphic proper names could be plausibly assumed, values could be assigned to the hieroglyphic signs from their cuneiform correspondences, and these could be cross-checked with further correspondences. Other correspondences were also provided by grammatical and lexical identifications of hieroglyphic with cuneiform elements. These cuneiform/hieroglyphic identifications were drawn from the seals and texts of Boğazköy and Ras Shamra, and for the later period from the Late Assyrian, and to an lesser extent Urartian, royal inscriptions. They would not always supply the exact value of the hieroglyphic sign, but at least they gave a clear indication of the range of probabilities. Thus for example when we have the cuneiform PNN²⁸ *ir-ḫu-li-e-ni* and *ur-bal-la-a*, of which the hieroglyphic spellings are now known to be *u + ra/i-hi-li-na-* and *wa/i + ra/i-pa-la-wa/i-*, the cuneiform can be seen to be sufficiently divergent to advise caution. Similarly Luwian *tap/ta-ap/-piš/pa-aš/-ša*²⁹, "sky" diverges from hieroglyphic *ti-pa-sa*³⁰, of which the syllabic values are sufficiently well established from other correspondences. In the case of the alphabetic correspondences drawn from Aramaic and Phoenician inscriptions, these could of course only suggest the consonant of the syllabogram not its vocalization, and even then the correspondence might not be exact. Compare Aramaic *grgm*, Assyrian *gur-gu-ma/e-*, Hieroglyphic *ku + ra/i-ku-ma*³¹; Phoenician *mpš*, Hieroglyphic *mu-ka-sa-*, and perhaps Hittite *mu-uk-šu*³².

2.1.1. Excavation has recently offered us some new cuneiform correspondences for hieroglyphic signs in the form of measurements written on Urartian pithoi. Two long-known cuneiform pithos measures are the *aqarqi* (*a-qar-qi*) and the *terusi* (*té/tè-ru-si*), sometimes abbreviated *a* und *te*³³. These words occur in their stem forms and belong, like most Urartian nouns, to the class of *-i*-stems³⁴. Jeffery Klein has pointed out³⁵ that the pithoi from Altintepe excavated and recently published by Tahsin Özgüç³⁶ have two measures written on them in (Hittite) hieroglyphs (see Fig. 4), and that there can be no doubt that these are to be identified with the cuneiform measures.

²⁸ See Laroche, *Noms*, nos. 1442, 1494.

²⁹ See Laroche, *DLL*, s.v.

³⁰ Contrary to Laroche (*DLL*, loc. cit., and *HH*, p. 55) this correspondence does not provide sufficient grounds for reading the hieroglyphic *tapasa-* instead of *tīpasa-*, nor for assuming an additional value *ta* for the well-established *ti* (*HH*, no. 90). Cf. Mittelberger, *Die Sprache* 8 (1962), p. 278.

³¹ Donner and Röllig, *KAI*² III, Index VI s.v.; Parpola, *N-AT*, s.v.; *Glossar*, s.v.

³² Donner and Röllig, *KAI*² III, Index III s.v.; *Glossar*, s.v.; Laroche, *Noms*, no. 815.

³³ See e.g. F. W. König, *HCI* (*AfO*, Beiheft 8; Graz 1955/57), *Wörterbuch*, s.v.

³⁴ W. C. Benedict, *Urartian Phonology and Morphology* (University of Michigan Ph.D., 1958), pp. 118, 135ff.; G. A. Melikišvili, *Die Urartäische Sprache* (*Studia Pohl* 7; Rome 1971), pp. 30ff.

³⁵ Personal communication. See his forthcoming article in *An. St.* 24 (1974).

³⁶ T. Özgüç, *Altintepe II* (Ankara 1969), Plates LIII–LIV.

They provide the following correspondences: — cun. *a-gar-qi* = hier. *á-há + ra/i-ku*, cun. *té/tè-ru-si* = hier. *tu-ru-ṣ / tu + ra/i-ṣ*. What attracts our attention is of course that ṣ corresponds to the cuneiform *si*.

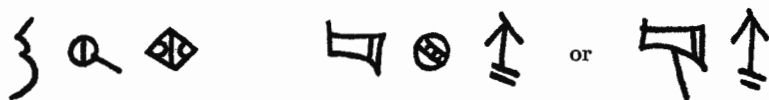


Fig. 4

2.1.2. We cannot however directly assign this value *si* to ṣ for the following reasons:—

(i) As regards the vowel, neither pair of words offers exact vocalic correspondences throughout. Thus, although we have cun. *a* = hier. *á*, cun. *gar* = hier. *há + ra/i*, cun. *ru* = hier. *ru*, we also have cun. *qi* = hier. *ku*, cun. *té/tè* = hier. *tu*, cun. *ru* = hier. *ra/i*. We cannot therefore confidently assume an *-i*-vocalization for ṣ.

(ii) As regards the consonant, we may note that the Urartian syllabary employs all sets of signs used in Akkadian to distinguish the sibilants *š, s, z*, but that doubt as to their phonetic connotations attaches to all of them, particularly to the set of *s* signs³⁷. Here again we can hardly infer the exact consonantal value of ṣ from this correspondence.

2.1.3. In spite of these reservations however, we consider that the correspondence creates a very strong presumption of a value *sibilant + vowel* for ṣ. Since ṣ and the closely related sign ṣ̄ are currently supposed to have the values *i* and *i*³⁸, this new evidence, pointing as it does to a value *CV* for ṣ, calls for a careful re-examination of the evidence on which these two signs have been considered to represent vowels. Furthermore the pair ṣ̄ ṣ̄, also currently regarded as vowel signs (*a, ā*)³⁹, share with ṣ ṣ̄ both frequency of occurrence and the differentiation introduced by the double stroke. By the parallelism of their forms, these too will be involved in our reconsideration.

2.2. In considering ṣ ṣ̄ and ṣ̄ ṣ̄ we must turn to their historical development. In particular we must remember that of the two pairs the script of the Empire period used only the first of each, i.e. ṣ and ṣ̄; and it is clear that ṣ̄ and ṣ̄ are innovations of the later script. The Empire script uses ṣ where later only ṣ̄ occurs, notably to write the demonstrative pronoun “this”⁴⁰, and ṣ̄ where later only ṣ̄ occurs, notably in the onomastic element and verb,

³⁷ Melikišvili, op. cit., p. 22; I. M. Diakonoff, *Hurrisch und Urartäisch (MSS, Beiheft 6; Munich 1971)*, pp. 46 ff.

³⁸ Laroche, *HH*, nos. 377, 376; Meriggi, *Glossar*, nos. 387, 1–2.

³⁹ Laroche, *HH*, nos. 209, 210; Meriggi, *Glossar*, nos. 171, 172.

⁴⁰ For the Empire period, see Laroche, *HH*, no. 376, I; also EMIRGAZI, *passim*.

piya-, 'give'⁴¹. We may therefore suppose that the late period \uparrow and \downarrow represent merely differentiated forms of the original \uparrow and \downarrow ; and since we have the presumption that \uparrow has the value *sibilant* + *vowel*, the same should hold good for both Empire and late \uparrow . What then is this differentiation introduced by the double stroke?

2.2.1. To decide this we should look first at Empire \downarrow and its subsequent differentiation. By way of cuneiform correspondences, we find that Empire \downarrow corresponds both with *i*, in the cuneiform PNN⁴² *i-ni-a*IM/U-up (*Ini-Tešub*; hier. \downarrow -ni-TEŠUP⁴³) and *ib-ri-LUGAL-ma* (*Ibri-Šarruma*; hier. \downarrow -pari-ŠARRUMA); and also with *ia*, both in the onomastic element *piya*- already cited, and in hypocoristics such as *Kiliya*, *Talmiya*⁴³ etc. In this latter context a particularly significant correspondence is that provided by YAZILIKAYA no. 39⁴⁴. There the name of the god Ea is written (DEUS) \downarrow . Laroche has demonstrated conclusively that at Yazılıkaya the gods' names appear in their Hurrian forms⁴⁵, and from the Ras Shamra lists we have the Hurrian form of Ea's name written alphabetically as *ey*⁴⁶. This correspondence would seem to favour the transliteration of the name as (DEUS) *ia*, in place of the traditional [†](DEUS) *a*.

2.2.2. With the differentiation of this sign into late \downarrow and \downarrow , the latter sign manifestly continues the *ia* correspondence noted for Empire, in particular in the element *piya*⁴⁷. We shall therefore postulate that the form \downarrow continues the *i* correspondence of its Empire counterpart⁴⁸. We point out indeed that, unless we allocate the value *i* to \downarrow , the phoneme will remain unrepresented in the hieroglyphic syllabary (a basically improbable assumption), since we are presuming, and hope to demonstrate, that \uparrow and \downarrow , currently supposed to represent this vowel, do in fact have the value *CV* (*sibilant* + *vowel*). If then we succeed in establishing the values for the late period \downarrow , \downarrow = *i*, *ia*, it will appear that the double stroke was introduced to differentiate the -*a*-vocalized syllabogram *ia* from the purely vocalic *i*.

⁴¹ Compare Empire period (Laroche, *Noms*, nos. 135, 1, 4; 365; 1267, 1, 4; 1416; 988) with the late period (Laroche, *Noms*, nos. 986; 1277). Also Laroche *apud* Özgüç, *Kültepe and its Vicinity in the Iron Age* (Ankara 1971), pp. 115–116. Also Meriggi, *Glossar*, s.v. *pi*-. Note that the verb in the late period is written only with \downarrow , never \downarrow ; when Meriggi quotes -*a*, collation shows \downarrow not \downarrow . Where neither occur, the sign *pi* should probably be read logographically as DARE; thus DARE-há etc. (not *pi-há*), = *piyaha*.

⁴² Laroche, *Noms*, nos. 238, 459. Bossert, *Orientalia* 30 (1961), 316f., 322.

⁴³ Laroche, *Noms*, nos. 576; 1228.

⁴⁴ Laroche, *RHA* XXVII/84–85 (1969), p. 71.

⁴⁵ Laroche, *JCS* 6 (1952), pp. 115–123; updated *RHA* XXVII/84–85 (1969), pp. 61–109.

⁴⁶ *Ugaritica* V, 248, n. 6; 454, g; 506, 11; 520. Cuneiform Hurrian spells the name *e-ia-an*, although this became confused with the goddess *Aya*, wife of the Sun-god.

⁴⁷ Cf. note 41 above.

⁴⁸ This could be supported by the PN \downarrow -si-ka+ra/i-ti-sa-pa-sa (*Iskar-Tispas*?) cf. Laroche, *Noms* no. 172; Bossert, *Orientalia* 30 (1961), p. 317. A Hurrian element *iskar* however seems less than well attested (cf. Purves; *NPN*, p. 220).

2.2.3. If we then turn to $\uparrow \underline{\uparrow}$, a parallel development seems probable. That is, Empire period \uparrow with the value *sibilant* + *vowel* was later differentiated by the addition of the double stroke to mark off $\underline{\uparrow}$ (*sibilant* + *a*) from \uparrow (*sibilant* + *i*). As for the nature of the sibilant, cuneiform and Aramaic/Phoenician correspondences will lead us, as they led Bossert⁴⁹, to the provisional transcription *z*. This transcription must not however be taken to define the exact quality of the sibilant which will remain debatable. This will not be our problem here, but will need consideration in a wider Anatolian language context.

2.3. Our proposal then, which is expressed schematically in Fig. 5, seeks to explain the evolution of the signs \uparrow and \llcorner of the phonetically undeveloped Empire script into the $\uparrow \underline{\uparrow}$ and $\llcorner \underline{\llcorner}$ of the more representative later syllabary.

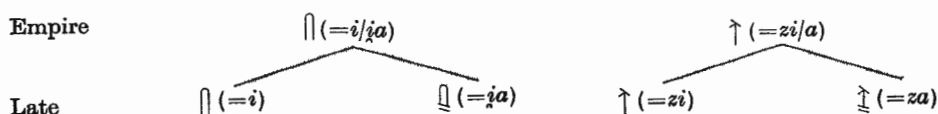


Fig. 5

In giving the values *zi/za* to $\uparrow \underline{\uparrow}$ we are following Bossert's original suggestion. He was also aware of the need to reconsider $\llcorner \underline{\llcorner}$, and in his last, posthumously published article⁵⁰ he noted some important correspondences which we shall use. Unfortunately however, by failing to distinguish between a mere correspondence and an established phonetic value, both for $\uparrow \underline{\uparrow}$ and $\llcorner \underline{\llcorner}$ he produced a system of totally unacceptable polyphonic values. It is our hope to retrieve some order from his uninhibited polyphonies, and to establish the phonetic values of the six signs, Empire \uparrow and late $\uparrow \underline{\uparrow}$, and Empire \llcorner and late $\llcorner \underline{\llcorner}$, upon a securer footing⁵¹. We shall begin by reminding ourselves of the grounds upon which the current values were allocated, and we shall try to show that the values which we propose may be conveniently substituted for them.

2.3.1. We begin with Empire \llcorner and its later developments $\llcorner \underline{\llcorner}$. The current value Empire $\llcorner = a$ was in fact based on the supposed same value for late \llcorner . However we have noted above (2.2.1.) that the cuneiform correspondences for this period are *i* and *zā*. Our problem is, how to allocate to \llcorner a phonetic value which will explain these correspondences. We consider that the value which fits best is *i* (*i*)/*zā*; that is, a basically consonantal syllabogram in which the *a/i* vocalization is as yet undetermined. This indeterminate vocalization in the Empire period is paralleled not only by *zi/za*, as we shall see below

⁴⁹ See above, 1.10.1.; below, 2.3.5.1-4.

⁵⁰ *Orientalia* 30 (1961), pp. 314-322. Already cited above, notes 23, 42, 48.

⁵¹ We should also note that the number of rare signs which receive their values from their alternation with $\uparrow \underline{\uparrow} \llcorner \underline{\llcorner}$ will continue to do so, i.e. they will also switch to our proposed values. These signs are *HH*, nos. 299, 379 and 335, 313, 112, 336, 128. Cf. Table 1.

(2.3.5.4.), but also by a number of other syllabograms, notably *há/i* (HH, no. 215) and *má/i* (HH, no. 391). The later syllabary, seeking greater phonetic accuracy, was obliged to supplement, adding in the latter two cases the signs *hi* and *ma* (HH, nos 413, 110), and in the former two, differentiating the two *a*-vocalized syllabograms \square , \triangle .

2.3.2. Proceeding to the \square of the late period, we have indicated that we wish to discard the current value *a* and replace it with the value *i*. This is partly to explain its lineal descent from *i/ia* of the Empire period, and partly to provide the late syllabary with a sign for *i* which, in view of the other values which we propose, it will not otherwise possess. Our choice of *i* as opposed to *e* is purely conventional and results from the incomplete differentiation of *e* in cuneiform, on which our understanding of hieroglyphic depends; cf. below, 4.1.

2.3.3. The value *a* for late \square was based on two cuneiform correspondences from proper names, the GN *Hamath* and the DN *Ea*, and from a lexical identification, the supposed verb *aia-*, "make". These require detailed examination, from which it will emerge that the value *i* is an acceptable substitute.

2.3.3.1. The writing of *Hamath* seemed at first sight compelling evidence for the *a* value, but closer inspection does not support this. From the Assyrian spelling *a-mat-/ha-mat-*⁵², we obtain a cuneiform correspondence of *a/ha* for \square . Cogent reasons however for not taking this as conclusive evidence for the phonetic value of \square are soon apparent. The Hebrew form of the name is חַמַּת indicating a pronunciation *ḥamát*; the shewa of the first syllable opens to *hatef pataḥ* only under the influence of initial *ḥ*⁵³. The Assyrian spelling can be explained in the light of this. An original **ḥamát* would be written **ḥimat*⁵⁴, but the influence of the W. Semitic *h* doubtless caused the syllable to open to *a*⁵⁵, thus *hamat*. The alternating presence and absence of *h* is also typical of Akkadian orthography⁵⁶. In view of this it is not surprising that the indeterminate unstressed short vowel of a Semitic place name should be represented by Indo-European speakers by the sign for a high front vowel (*e/i*)⁵⁷ rather than a low central vowel (*a*). Thus we are not disturbed at the spelling *imatu-* in place of the current **amatu-*, which we obtain from our reading of \square ; and we consider that this place name, so far from supporting the *a*-value, is

⁵² See the spellings cited in Parpola, *N-AT*, s.v. HAMAT.

⁵³ A. B. Davidson, *Introductory Hebrew Grammar* (24th ed.; Edinburgh 1932) 8, 2a-b.

⁵⁴ Cf. W. von Soden, *GAG*, § 8d, for the cuneiform writing of shewa.

⁵⁵ Cf. *GAG*, § 18b. The Akkadian *a*-class imperatives parallel this development. Normally the unstressed first syllable shows the shewa (*limad*, i.e. **límád* etc. unless an initial emphatic or laryngeal opens this to an *a* (*šabat*, i.e. **šabát* etc.).

⁵⁶ *GAG*, § 8i; 25a.

⁵⁷ Cf. Forrer (*HB*, p. 24) for an early suggestion of this value for the first syllable of "Hamath", although this was made on different grounds.

perfectly consistent with the *i*-value which we postulate. We may further compare late spellings in which $\text{A}\mu\alpha\theta$ alternates with $\text{A}\mu\alpha\theta$ or *Emath*⁵⁸.

2.3.3.2. As for the DN *Ea*, we may base our reading on a comparison with the Empire spelling examined above, 2.2.1. For the Empire we have noted the alphabetic Hurrian spelling *ey*, the cuneiform Hurrian spelling *e-ia-an*, and the hieroglyphic *ia*. In the normal late spelling $\Pi \text{ } \Pi$ -*sa*, our reading as *i-ia-sa* (*Iyas*) is at least as acceptable as, if not preferable to, any alternative. Thus the cuneiform correspondences from this name too support rather than contradict our proposal.

2.3.3.3. The lexical identification Luw. *a-a-(ia)-/a-i-ia-* = Hier. $\Pi \uparrow \Pi / \Pi \uparrow \Pi$ ($\uparrow a-i-a/\bar{a}-$) is completely demolished by our proposals. Thus the verb "to make" becomes *i-zi-i-/i-zi-ia-*. Something of this word and its possible connection with Hitt. $\ddot{i}e-/\ddot{i}ia-$, Luw. $\ddot{a}ia-$ is considered below, 4.6. (a). At this juncture we can only point out that the current reading *aia-* is rejected on two grounds, the values of both Π and \uparrow . We must state that we cannot accept this isolated lexical identification as evidence for these values in the face of the other evidence which we present.

2.3.4. In the script of the late period Π was given its conventional value \bar{a} on two grounds:—

(i) its occurrence in the element *piya-*.

(ii) its occasional alternations in certain circumstances with Π .

Since Π was taken to be *a*, it appeared that Π would also have to be a form of *a*. The distinction was explained in various ways, none of them satisfactory. Nasalization would not fit the facts⁵⁹, and vowel length was indemonstrable as well as being intrinsically improbable⁶⁰. In *piya-*, after *pi*, as indeed after every *-i*-vocalized syllabogram, Π would fit as *a*; but we should remember that the cuneiform correspondence is $\ddot{i}a$ not *a* and consider whether the glide would not be marked in hieroglyphic as well⁶¹. It is only after *-a*-vocalized syllabograms that the choice between *a* and $\ddot{i}a$ becomes crucial, and here indeed KARATEPE has provided a Phoenician correspondence which should be decisive⁶². The ancient town of Karatepe itself was named in Phoenician $\text{ }^{\text{r}}\text{twdy}$ after its builder $\text{ }^{\text{r}}\text{twd}$. Its name in hieroglyphic ends $-\text{ti-wa-ta-}\Pi$ -, i.e. Π appears after an *-a*-vocalized syllabogram in a position where the Phoenician offers the consonantal correspondence *y*. It is unreasonable to suppose that the Phoen-

⁵⁸ Josephus, *Ant.* I, 138; Septuagint $\text{A}\mu\alpha\theta/\text{E}\mu\alpha\theta$; Vulgate (*H*)*emath*.

⁵⁹ Proposed by Gelb; see Laroche, *HH*, no. 210/3–4. Cf. above 1.9.2.

⁶⁰ Stated but not argued by Meriggi following Peiser, *ZA* NF 5 (1930), p. 184. Regarded by Laroche as "encore indécise", "une valeur conventionnelle"; cf. above, 1.9.1.

⁶¹ For the origin of this suggestion by Mittelberger and Kalag, see above 1.10.3. Neumann has recently treated it in detail; see above n. 26.

⁶² KARATEPE 206. See Neumann, loc. cit., p. 246.

ician spelling represents anything other than the consonantal skeleton of the hieroglyphic place name, and it also seems more than probable that this name should be formed from the personal name by the addition of the suffix *-ia*. Thus both correspondences the cuneiform *piya-* and the alphabetic *ṣtudy*, point to the value $\text{𐎶} = ia$. Since this ties in with the Empire correspondence with *ia* noted above, it must be considered entirely acceptable.

2.3.5. We now turn to a parallel consideration of 𐎶 𐎶 , and the correspondences on which the current values *i/i* are based, to see how our proposals will fit.

2.3.5.1. Beginning with Empire 𐎶 we find the only clear correspondence with cuneiform is the name on the seal impressions *SBo* II, 80 and 81 (see Fig. 6).



Fig. 6

Since late 𐎶 was supposed to have the value *i*, this name was read **mi-i + ra-muwa*, and identified with the cuneiform name on a tablet fragment *me-ra-A-A-aš*⁶³. The first element was thus equated with the country on the "Tarkondemos" seal, written *mi + ra-à* (REGIO), i.e. the Arzawa land of Mira/Kuwaliya. Beyond this correspondence, there is also the common writing of the onomastic element *ziti* as *VIR + 𐎶*; here 𐎶 was taken as a phonetic complement⁶⁴, and since *ziti-* is an *-i*-stem, this was supposed to support the equation $\text{𐎶} = i$. However the parallelism with the cuneiform *LÚ-i* claimed by Laroche⁶⁵ is more apparent than real, since cuneiform *LÚ* in Luwian names has the phonetic complement *-iš/-in* only, never *-i*⁶⁶. Thus a vocalic phonetic complement of the type *VIR-i* does not occur in cuneiform; and the later well-attested phonetic complement *VIR-ti-* should warn us against inferring a value *i* from this context.

2.3.5.2. If we substitute the value *za/i* (i.e. the syllabogram with the undetermined vowel, as postulated for the Empire period) for the value *i*,

⁶³ Laroche, *Noms*, no. 807.

⁶⁴ Alp, *Namen* (1950), 19ff.

⁶⁵ *HH*, no. 312, 2.

⁶⁶ This observation is based on an examination of all the *ziti*-names listed by Laroche, *Noms*, p. 324. The apparent exception *muwa-LÚ-i* (no. 840) is taken from an unpublished fragment, and may be dative (as e.g. *id-i* (*DLL* s.v.)), or perhaps broken.

instead of the name [†]*Miramuwa*, we obtain *mi-za/i + ra/i-muwa* i.e. *Mizramuwa*, a name also attested in cuneiform as *mi-iz-ra-mu-wa/A-A-aš*⁶⁷. Thus cuneiform correspondences can be offered in support of either reading. However the seal impressions also offer some cuneiform signs which might have been assumed to render the hieroglyphic name, and thus provide a bilingual writing. This would be all the more probable since the profession of the seal's owner is given as "MAGNUS SCRIBA", a designation which has been supposed to indicate mastery of both cuneiform and hieroglyphic⁶⁸. Güterbock read the signs as RUG.GI.NU (x) while admitting that they gave no sense⁶⁹. With every reservation we may suggest a reading which could serve to identify the cuneiform and hieroglyphic writings, i.e. *mis'-ri'-[mu?]-wa?*⁷⁰. If this reading were acceptable, it would confirm the reading *Mizramuwa*, and hence the correspondence *z* (+ vowel) for *ṣ*. If rejected, the cuneiform does not provide support for either name but remains an irritatingly unsolved mystery.

2.3.5.3. In the case of VIR + *ṣ*, the substitution of the value *za/i* for *i* finds a ready explanation. Instead of taking *ṣ* as an unparalleled type of phonetic complement, we suggest the reading (VIR)*zi*, i.e. a logogram followed by the phonetic sign for the word's first syllable, a writing directly paralleled by e.g. (MONS) *tu* for the name *Tudhaliyas*, and by occasional cuneiform abbreviations⁷¹. This supposition is further supported by one of the odd variants provided by KARATEPE, where we find that the ending of the Nom./Acc. plural

⁶⁷ Laroche, *Noms*, no. 811. This point was clearly made by Bossert, *Orientalia* 29 (1960), pp. 440ff.

⁶⁸ Laroche, *RHA* XIV/58 (1956), p. 26ff.

⁶⁹ *SBo* II, p. 46.

⁷⁰ The following observations on this reading are offered:—

The first sign which we suggest to be *mis/z* differs from the usual Boğazköy version only in having a superfluous upper front horizontal.

For the last three signs, Professor Güterbock has very kindly collated the seal impressions in Ankara, and we offer a paraphrase of his communication here:—

His drawings as published are correct.

ri: in 81, justifiable if one assumes that the last vertical is represented by the little knob upper right of the rest of the sign; if so, the tail of the vertical had disappeared from the seal or failed to show in the sealing because of an obstruction. In 80, the last element of the sign does have the saw-teeth as drawn; whether this was meant to be the last element of *gi* as he originally supposed, or of *ri* as we suggest, is impossible to decide. In either case the seal-cutter seems to have blundered.

mu: in 80 and 81, impossible to decide between *nu* and *m[u]*.

wa: in 81, missing from edge of impression. In 80 there is a small horizontal at the end preceded by a damaged surface as shown; but there are no other traces, and the horizontal sits somewhat low for *wa*.

He concludes:—

"So *-ri'-m[u]-[w]a*, at your risk—it is not impossible but not easily evident either."

⁷¹ E.g. *Ikán-li*, *Ikán-iš*, for *Kantuzzilis* (*Noms*, no. 503); cf. Bossert, *Orientalia* NF 23 (1954), 134.

common, normally written \uparrow , is occasionally written with the sign VIR (*HH*, no. 313). This sign is thus shown to be an equivalent of \uparrow ⁷². If \uparrow , and the nom/acc. plural ending, were indeed *i*, this variant would be unintelligible; but if we can substitute *zi*, the variant is immediately explicable as one of the rare and freakish syllabograms used by KARATEPE, formed acrophonically from the common element *ziti*-, and doubtless connected with the peculiar logographic writing of the Empire period.

2.3.5.4. Thus for the Empire period, both cuneiform correspondences currently cited in support of the value $\uparrow = i$ can in fact be better taken to support the value *za/i*. Our view of the undetermined quality of the vowel of \uparrow at this period is based on a combination of its association with *ziti*-, as noted above, with its use to write the demonstrative pronoun *za*-, indicated only by \uparrow in the later period; that is, the former speaks unambiguously for a value *zi*, the latter for *za*. As already remarked we find this indetermination paralleled at this date by the value of \uparrow as *i/ia*, as well as by some other signs (see 2.3.1.).

2.3.6. The *i*-value for late \uparrow was based solely on its occurrence in the verb $\uparrow\uparrow\uparrow / \uparrow\uparrow\uparrow$, "make", currently read **aia-/aiā-*. However we have already indicated (above, 2.3.3.3.) that in the face of the other evidence which we present, we cannot accept the lexical identification from which this cuneiform correspondence was drawn. This leaves the value $\uparrow = i$ without foundation.

2.3.6.1. On the other hand, we have seen (in 2.3.5.3.) one reason for supposing that in this period $\uparrow = zi$, namely the alternation with it in KARATEPE of the sign VIR and its consequent association with *ziti*-. We can offer a further cuneiform and Aramaic correspondence, which in our view lends strong support to this value. The name of the city-state, modern Malatya, is consistently written in hieroglyphic as in Fig. 7⁷³.



Fig. 7

For this place name cuneiform has the spellings *uru mi-li-di-a* (c. 1100 B.C.)⁷⁴ and *KUR/uru ma/me/mi-lid/li-da/di/du* (900 B.C. onwards)⁷⁵, while Aramaic has *mlz*⁷⁶. As readings of the hieroglyphic name's individual signs, Meriggi has convincingly demonstrated the value *ma_x* for the first sign (*HH*, no. 109) by

⁷² *HH*, no. 313/III.

⁷³ *HH*, no. 109/1.

⁷⁴ Inscriptions of Tiglathpileser I; e.g. Weidner, *A/O* 18 (1957/58), p. 350 l. 31.

⁷⁵ Parpola, *N-AT*, s.v. MELIDI.

⁷⁶ Donner and Röllig, *KAT*², no. 202 A 7.

comparison with the writing *ma* (REGIO) on the royal signet⁷⁷; while Laroche, drawing on a KARATEPE variant has made the value *li* most likely for the second (*HH*, no. 125). This leaves us with the \uparrow , which here obtains an early cuneiform correspondence of *di-a* and a later alphabetic one of *z*. These surely point to a phonetic spelling *ma_x-li-zi* (URBS) in preference to the current *ma_x-li-i* (URBS), and may thus be cited in support of the value $\uparrow = z + \text{vowel}$, although here the quality of the vowel is not unambiguously suggested.

2.3.7. To \uparrow we also assign the approximate value *z + vowel* from its association with Empire \uparrow of which we have seen it to be a late form. This association with Empire and late \uparrow had led to its current identification as vocalic, and an explanation of the differentiation as being one of vowel length, hence the value *i*. Two cuneiform correspondences were offered in support of this, first the place name in KARGAMIS A 6, l. 2, written *mi- \uparrow + ra/i* (URBS); and secondly the name of the author of KARATEPE, written *á + LITUUS- \uparrow -ti-wa-tà-* (= Phoenician *ʔtwd*).

2.3.7.1. The place name was read *mi-i + ra*, and identified with the second millennium Arzawa-land *Mira*, already mentioned in 2.3.5.1. above. However as Bossert pointed out⁷⁸, a very similar line of argument can be used in the case of the personal name *Miramuwa/Mizramuwa*, above 2.3.5.2. That is the reading *mi-za + ra/i* (URBS) (i.e. *Mizra/i*, "Egypt") is just as defensible epigraphically, and furthermore much more probable from the context⁷⁹. Thus in this case apparent support for the value $\uparrow = i$ turns readily to support $\uparrow = z + \text{vowel}$.

2.3.7.2. In the personal name, the first onomastic element showed a Phoenician correspondence *ʔ*. Furthermore this element, which occurs as an independent verb, gained a cuneiform correspondence from a lexical identification with the Hittite verb *aššija-*, "love"⁸⁰. When the hieroglyphs corresponding to the Phoenician and cun. Hittite were sought, simply because \uparrow was already supposed to represent a vowel, the sibilant (alphabetic *z*, cuneiform *šš*) was identified in the LITUUS⁸¹. This however was never at all satisfactory. In no other occurrence of the LITUUS is any *s/z* value demonstrable, and it remains very unclear, as admitted by Laroche⁸². It is thus equally valid to seek the correspondence of the Phoenician *z* in the \uparrow , and to consider an

⁷⁷ *Glossar*, (Nachträge), p. 238.

⁷⁸ *Orientalia* 29 (1960), p. 440f.

⁷⁹ The author of A 6 is boasting how far his reputation extends and it is far more likely that he should claim that it reached Egypt rather than a W. Anatolian principality which is not known to have survived into the 1st. millennium.

⁸⁰ See *HH*, no. 20/II; Güterbock, *Eranos* 47 (1949), p. 112.

⁸¹ Thus Bossert suggested *s(i)* (*Asia* [Istanbul 1946], 121, 143ff.). This was then followed by Hrozný, Meriggi, Friedrich and, with reservations, Laroche.

⁸² *HH*, no. 378.

alternative explanation of the LITUUS⁸³. Thus instead of reading the name as $\acute{a} + si-i-ti-wa-tà/ra/i-$, we propose $\acute{a} + x-za-ti-wa-tà/ra/i-$, i.e. *Azatiwatas*; the value of the LITUUS (= x) may be in practice ignored as far as the phonetic rendering of the name is concerned.

2.3.7.3. As a third cuneiform correspondence to 𐎶 we return to where we began, namely the Uartian pithos correspondence of 𐎶 with *si*. As we saw, this was only a general correspondence indicating *sibilant* + *vowel* but insufficient to characterize either more exactly. Indeed the other cuneiform and alphabetic correspondences just quoted also point to the consonant as being *z*, but give no indication of the vowel. The vocalization of the syllabogram as *za* we base on the contrast with late 𐎶 , which is characterized as *zi* by its association with *ziti*, and by our view that the differentiation of 𐎶 𐎶 runs strictly parallel to that of 𐎶 𐎶 , shown above to represent *i/ia*; that is, the double stroke in both cases marks the *-a*-vocalization of the syllabogram. We shall of course see below that this interpretation of all four signs gives us very satisfactory readings of grammatical and lexical elements, which we consider to provide additional corroboration.

2.3.8. Thus far the epigraphic evidence, in which we hope to have shown that the readings of 𐎶 𐎶 and 𐎶 𐎶 according to our proposals are in every case equally acceptable, and in some cases distinctly preferable, to those which they replace. The advantages of our proposed readings become clear when we turn to a consideration of the grammatical and lexical changes which follow from them. Before we proceed to these however, we should look at some purely orthographic results of the change.

3.1. Observations of scriptio plena in hieroglyphic are not new⁸⁴. Our proposals however will modify our view of it considerably. Thus in the current system of transliteration, the following are regarded as instances of it:—

- (i) $Ca + \text{𐎶}$: $Ca + \text{𐎶}$: $Ca + \acute{a}$
- (ii) $Ci + \text{𐎶}$: $Ci + \text{𐎶}$
- (iii) $Cu + u$

⁸³ We may attempt one here. It would seem that LITUUS cannot have a consonantal value, because this would appear in the Phoenician. In the peculiar writings of the KAYSERI inscription 𐎶 and 𐎶 have freakish equivalents of VAS and VAS + LITUUS (HH, no. 336/II, 1 and 4). This may suggest that the LITUUS was an addition equivalent to the double stroke in 𐎶 and 𐎶 , which we consider to mark an *-a*-vocalized syllabogram (see above 2.2.2–3.; below, 2.3.7.3.). Can it be that the LITUUS is no more than this? We content ourselves with suggesting that this may be the case, but we cannot pursue the further explanation of why it should be attached to the syllabogram \acute{a} which itself represents the initial *a*.

⁸⁴ See most recently Mittelberger, *Die Sprache* 10 (1964), p. 56, § 10.

Since we take \uparrow \updownarrow and \sqcup as consonantal syllabograms, we are left with only four vowel signs, \acute{a} (initial), \grave{a} , i (\sqcup), and u , and thus only three possibilities of scriptio plena:—

- (i) $Ca + \acute{a}$
- (ii) $Ci + i$ (\sqcup)
- (iii) $Cu + u$.

3.2. Plene writings of u are both well exemplified and undisputed. In the final position they are perhaps most commonly seen in the enclitic personal pronouns of the 1st. and 3rd. persons singular $-mu(-u)$ and $-tu(-u)$, as well as in the independent pronouns of the 1st. person, $(\acute{a}-)mu(-u)$. Similarly the 3rd. persons of the imperative in $-tu(-ru)/-ntu$ also exhibit this feature, e.g. $pi-\grave{a}-tu(-u)$; $tara/i-pi-tu(-u)/tara/i-pi-ru-u$. The adverb $wa-su(-u)$ extends the list. Scriptio plena of u internally does not seem to be so common, but at least one clear set of examples is available, (DEUS) TONITRUS- $hu(-u)-za-$.

3.3. With the reading $\sqcup = i$, we gain some notable plene writings in $-i$ exactly parallel to those in $-u$ just quoted, and at the same time we clear up a difficulty of long standing.

3.3.1. In final position the enclitic "reflexive" pronouns of the 1st. and 3rd. persons $-mi(-i)$ ⁸⁵ and $-ti(-i)$ exactly parallel the usage of $-mu$ and $-tu$. More important the ablative ending in $-(a)ti$ also shows this plene writing; compare for example $\acute{a}-mi-\grave{a}-ti-i$ IUSTITIA- $na-ti$ (A 6, l. 2) with $mi-\grave{a}-ti-$ "IUSTITIA"- $n\grave{i}-ti-i$ (A 12, l. 4). This interpretation removes the difficulty of having these forms ending in $-mia/-tia$, $-(a)tia$. This has normally been ignored in the past, simply because inexplicable⁸⁶. Internally such examples of scriptio plena are particularly common in the writing of $-i$ -stems, including the possessive adjective $amis$, and also participles in $-mis$. Compare for example the following forms:—

Nom. $t\acute{a}-ti(-i)-sa$: $\acute{a}-mi(-i)-sa$: BONUS- $mi(-i)-sa$ ⁸⁷

Acc. $\acute{a}-mi(-i)-na$: BONUS- $mi(-i)-na$

Dat. $t\acute{a}-ti(-i)$: $\acute{a}-mi(-i)$: BONUS- $sa-mi(-i)$

Here again the change of reading removes an unexplained intrusive $-a-$ from the declension of clearly recognized $-i$ -stems (cf. below, 4.2.).

3.3.2. In the cases just cited the optional plene writings followed the syllabograms mi and ti . If we seek further, we find other syllabograms with parallel

⁸⁵ See Mittelberger, *Die Sprache* 9 (1963), p. 94 § 36; F. Josephson, *RHA* XXV/81 (1967), p. 135f.; Hawkins, *An. St.* 19 (1969) p. 105f.

⁸⁶ Cf. Mittelberger, *Die Sprache* 10 (1964), p. 75ff., especially § 34.

⁸⁷ See *Glossar*, s.v. $wasmi-$ and $wasu-mi$. These are undoubtedly the same words. For the form BONUS- $mi-i-sa$, which is not listed in the *Glossar*, see *ALEPPO* 2, l. 1 (collation by Hawkins).

writings. That normally transliterated *wa* (*HH*, no. 439) has this value well enough attested by cuneiform correspondences, but a parallel *-i*-vocalization for the same sign has also been postulated⁸⁸. In just those cases where from cuneiform parallels we should expect to find a value *wi*, we now find plene writings in *-wi-i*, notably in the ending of the 1st. person singular present, e.g. *ta₄-nu-wa-wi-i*, *pi-pa-sa-wi-i*; and (PES) *á-wi(-i)-*, “to come”⁸⁹. We may therefore accept the sign *HH*, no. 439 as having a dual vocalization as *wa/wi*, which is of course paralleled by the cuneiform *wa/wi/wu*. We therefore use the transliteration *wa/i* for this sign.

3.3.3. The “enclitic” syllabogram “thorn” (*HH*, no. 383) is also known to have this dual vocalization as *ra/ri*, since it can represent a rhotacism of the groups *ata* > *ara*⁹⁰ and *ati* > *ari*⁹¹. Accordingly we transliterate it *ra/i*. When rhotacism occurs in the ablative ending *-(a)ti*, which, as we have seen above, may show a plene writing in *-ti-i*, we should expect to find a comparable alternation between *x+ri* and the plene *x+ri-i*. The latter does occur but only rarely, which is apparently due to an orthographic phenomenon examined below, 4.2.1.3.

3.3.4. Some scholars have long postulated for the signs *ná* and *nà* (*HH*, nos. 214, 411) the value *ní* and *nì*, and for *sá* the value *si*⁹². If we look for plene writings comparable with *mi-i*, *ti-i* and *wi-i*, we shall find them occurring consistently with these three signs. Thus we find *ní(-i)/nì(-i)* used to write the negative *ni*. Ethnic adjectives in *-wani-* (e.g. *há+ra/i-na-wa-ní/nì(-i)-* (URBS)), and stems in *-ni-* (e.g. DEUS-*ní/nì(-i)-*) produce a plentiful crop of these writings. For writings *-si(-i)*, we need go no further than the numerous genitives in *-(a)si* (e.g. *¹su-hi-si(-i)*) and genitival adjectives in *-(a)si-* (e.g. *á-pa-si(-i)-*), discussed further below, 4.2.1.2. We therefore accept the *-i*-vocalization of these signs, and thereby obtain a further batch of plene writings *ní-i*, *nì-i* and *si-i*, which will be seen (below, 4.2.) to transfer a substantial group of nouns from supposed *-a*-stem to clear *-i*-stems with cuneiform parallels.

3.3.5. With all these examples of plene writings of *i*-vocalized syllabograms (*mi-i*, *ti-i*, *wi-i*; *ní-i*, *nì-i*, *si-i*, as well as obvious ones for which parallels have not been quoted, *hi-i*, *li-i*, *pi-i*) we should return to the vocalization of *†*, postulated as *zi* on epigraphic grounds by its connection with *ziti-*, above

⁸⁸ Especially by Mittelberger, *Die Sprache* 8 (1962), p. 277; *ibid.*, 9 (1963), p. 81, § 19; *ibid.*, 10 (1964), p. 52, § 4.

⁸⁹ Hawkins has argued (*RHA* XXIX [1971], p. 113ff.) that the common verb PES-*wa-*, currently read *†ti-wa-*, must be read *awa-*. With our proposed system we find this verb written *á-wa(-i)-*, hence clearly to be read *á-wi(-i)-* and equated with Luw. *awi-*, “come”.

⁹⁰ E.g. in *á+x-za-ti-wa-tà-ja* / *á+x-za-ti-wá+ra/i-ja* (KARATEPE, 326).

⁹¹ E.g. in *á-mi-ja+ra/i* (KARATEPE, 91) beside the non-rhotacized form *á-mi-ja-ti-i* (KARGAMIS, A 6, 1. 2).

⁹² Most recently Mittelberger, *Die Sprache* 8 (1962), p. 280f.; *ibid.*, 9 (1963) p. 72ff.

2.3.5.3. ff. This vocalization is also supported on orthographic grounds by plene writings parallel to those under consideration. Thus the Nom./Acc. plural common ending is written either \uparrow or $\uparrow \parallel$ (e.g. in DEUS-*ní/nì(-i)-zi(-i)*), which with the current transliteration appears as the particularly inexplicable $\uparrow(-a)ia$ (i.e. \uparrow DEUS-*ná/nà(-a)-i(-a)*), but with our transliteration can be taken as a normal plene writing (i.e. $-zi-i = -^nzi$).

3.4. Plene writings in $-a$ do not bulk as large as those in $-u$ and $-i$. The surviving vowel sign⁹³ \grave{a} (*HH*, no. 450) is well known to be ambiguous. In final position it can in no case be shown to have any phonetic function, whether following *Ca*, which would be a plene writing, or after *Ci*, *Cu*, which would presumably mark a diphthong or hiatus; on the contrary it can in a number of cases be shown to have a zero value, in particular when it follows forms which, though written as ending with a *CV* syllabogram, are recognized as ending in a consonant (e.g. the Nom. and Acc. singular common case endings in $-s(a)$ and $-n(a)$). In these cases then it must be taken as a mere word-ender or space-filler (a diminished \parallel is also so used in the ASSUR letters).

Thus the only possibilities of a plene writing of a by \grave{a} are internal, but in fact only one possible set of instances of this occurs with any frequency, namely in the demonstrative pronoun *za(-à)-* (Nom., Acc., Dat./Abl. singular; Nom./Acc., Dat. plural). In this use too it alternates with zero, and it may be that it is again used as a space-filler in these common short forms. But if it is in fact a genuine phonetic writing⁹⁴, it would provide us with an isolated series of plene writings of $-a$, which otherwise do not normally occur in our system. The apparent indifference of hieroglyphic in this matter we may attribute to the basic nature of the $-a$ -vocalized syllabograms (which paradoxically are the series normally used to indicate vowelless consonants such as the Nom. and Acc. singular common of the noun). We may also note that *Ci* + \grave{a} never occurs internally, which we explain by the fact that hieroglyphic writes $-iya$ as *Ci* (+ \parallel) + $\underline{\parallel}$ (i.e. *Ci* (+ i) + \grave{a}).

⁹³ This applies to the late period where \acute{a} (*HH*, no. 19) is used initially only. It is possible that in the Empire period \acute{a} may have been used internally or finally, as in e.g. the PN *za-za-á* quoted below, 4. 6h), n. 165.

⁹⁴ The relative pronoun parallels these writings in two cases, the Nom./Acc. singular neuter and Dat. singular. However the relative is seen with our proposed readings to be an $-i$ -stem as in Hittite and Luwian, being normally written REL(- \parallel)-, that is with the omissible complementary vowel $-i$ -, cf. below, 4.3.1. In the two cases mentioned, it is written REL(- \acute{a})-, namely REL(- \acute{a})-*za* (**hwanza*?), REL(- \acute{a})-*tì* (**hwatì*?). Since parallel pronominal declensions also show the $-a$ -vowel in these cases (Nom./Acc. singular neuter—cf. *amanza*, “my”; Dat. singular—cf. *zati*, *apati*, “this, that”), it seems likely that in the case of the relative also, \acute{a} represents a genuine complementary vowel written by the only possible means. These two writings perhaps strengthen the case for considering that the use of \acute{a} in writings of *za-* is similar, that is a genuine plene writing.

3.5. As an appendix to our review of scriptio plena of the types listed above we should add a note on writings of the type $Ca + \Pi$. While under the current system of transliteration this would be taken as a simple plene writing (i.e. $^tCa + \alpha$), under our system this will mark the genuine writing of a diphthong ($Ca + i$). These are not in fact common except in one context, that is the alternative form of the 3rd. person singular present parallel with those ending in $-ti$. In these cases of course, $-i$, so far from being a plene writing, is in fact the actual morphemic ending of this form. See below, 4.4.

4.1. We should now consider how the proposed values of $\uparrow \underline{\imath}$ and $\Pi \underline{\imath}$ affect our understanding of the grammar and lexicon of Hier. Luwian. A preliminary warning is necessary. Professor Meriggi has stressed more than once⁹⁵ that it is unwise to indulge in phonetic speculations apropos of a language imperfectly understood and imperfectly documented. Here we must again repeat that we are not in a position to define closely the phonetic values of the signs that we are discussing. In the case of z - it is conceivable that we are dealing either with a voiced sibilant ($[z]$ or even $[ʒ]$) or with an affricate ($[ts]$ and/or $[dz]$ or even $[tʃ]/[dʒ]$). Yet it cannot be excluded that z - has both values at the same time or even covers a wider phonetic spectrum. Similarly, we cannot make any definite statement about the exact quality of the vowels represented by our signs. In particular i is meant to be a conventional transcription which in no way prejudices the issue about the possible existence, at a phonetic or phonemic level, of an $[e]$ sound.

With these warnings in mind we may now turn to a description, necessarily brief, of some grammatical phenomena. The consequences of the new readings are far-reaching: they concern most of the inflectional and derivational patterns of the language.

4.2. We shall start with noun inflection. Some problems of noun-derivation will be discussed later (4.5.), but here we must point out that the new readings have as an immediate result a clarification of the distinction between $-i$ - and $-a$ -stems. It is well known that Cun. Luwian, if compared with e.g. Hittite, shows a definite preference for $-i$ -stems (i.e. for nouns and adjectives which have a nominative sg. ending in $-is$)⁹⁶; these were either inherited or borrowed as such, or were introduced as ' $-i$ -thematizations' of consonantal stems or as replacement for earlier $-a$ -stems. The position of Lycian is not very different. If the new readings are accepted, Hier. too appears to behave

⁹⁵ E.g. in *Manuale* I, 24.

⁹⁶ It is not easy to find an unambiguous criterion to define $-i$ - and $-a$ -stems. From now on we shall call $-i$ -stems those stems that yield nouns with a Nom. sg. MF in $-is$; we shall call $-a$ -stems those stems which yield nouns with a Nom. sg. MF in $-as$ and an Acc. in $-an$, and which show the $-a$ - preserved through most of the declension.

in a very similar way to that of Cun. Luwian. Some forms have been mentioned above (3.3.1.): here it is sufficient to refer to words like the following:

Hier. (OVIS) *ha-wà/i-i-sa* (*hawis*) 'sheep': cf. Luw. *ha-ú-i-iš*.

Hier. DEUS-*ni-i-sa* (*mas(s)anis*) 'god': cf. Luw. Nom. pl. *ma-aš-ša-ni-in-[zi]*, and Nom. sing. *-ma-aš-ša-ni-iš* (e.g. in *ʃan-ni-ma-aš-ša-ni-iš*); Lyc. *mahāi*.

Hier. *tá-ti-i-sa/ tá-ti-sa* (*tatis*) 'father': cf. Luw. *ta-a-ti-i-iš*.

Hier. (ANNUS) *u-si-na* (*us(s)in*) 'year' (Acc.): cf. Luw. MU.KAM-*iš*.

In the current transcription some of these forms are treated as *-a*-stems (e.g. *†ha-wà-a-sa*: *hawas*) in spite of the Luwian parallels and of the certain etymology (cf. e.g. Lat. *ovis*, Gr. *οἶς*, Skt. *avih*); others (e.g. *†tá-ti-a-sa*) are either taken as *-i*-stems in spite of the penultimate sign (*-a-* in the current transcription, *-i-* in our transcription), or as *-ia*-stems which alternate—some-what unpredictably—with *-i*-stems (cf. above 3.3.1.).

4.2.1. Some of the alterations produced by the new values in our interpretation of the case-endings have already been discussed by Bossert. The most striking, as Bossert saw, obviously concern the Nom.-Acc. pl. MF in *-nzi* (e.g. *tá-ti-i-zi*; cf. Cun. Luw. *-nzi*) and the Dat. pl. in *-nza* (e.g. REX-*tá-za* or *tá-ti-za*; cf. Cun. Luw. *-nza*). The current transcription yielded a Nom. pl. in *-(a)-i* (e.g. *†tá-ti-a-i*) and a Dat. pl. in *-i* (e.g. *†REX-tá-i*, *†tá-ti-i*). It is worthwhile to point out that, if the new readings are accepted, this has some consequences for the interpretation of the Cun. Luw. endings. In particular it strengthens the case of those who see in *-nzi* and *-nza* a real final vowel, and not a sign used only for graphic reasons⁹⁷. It can no longer be argued that the final *-i* of *-inzi* and the final *-a* of *-anza* are merely graphic repetitions of the previous vowel, since in Hier. we have a Nom. pl. in *-iⁿzi* for the *-i*-stems (*tatinzi*) and a Nom. pl. in *-aⁿzi* for the *-a*-stems (*huhanzi*).

Any discussion of noun inflection must consider the case system as a whole. We have set up here a table of endings for the *-i-* and *-a-*stems MF; this does not take into account the pronouns, which have a declension of their own (see below 4.3.1-2.), or the doubtful and difficult consonantal stems⁹⁸. The

⁹⁷ Cf. e.g. Kammenhuber, *Handbuch* 276, 307. For the opposite thesis that final *-i* and *-a* in Cun. Luw. *-inzi* and *-anza* are merely graphic signs, cf. e.g. Laroche, *RHA* XXIII/76 (1965), 40.

⁹⁸ The problem is that it is not even clear whether Hier. has preserved any example of a full paradigm for the consonantal stems. The question is too complicated to be discussed here, but we may mention that there is some evidence for an athematic genitive ending *-as* (e.g. in (DEUS) TONITRUS-*hu-ta-sa*), for an *-i* Dat. (DEUS) TONITRUS-*hu-ti-i*), and an *-ati* Abl. (DEUS) TONITRUS-*hu-ta-ti*). Some neuter forms are quoted below (4.2.2ff.). We have also neglected the problems posed by the *-u*-stems, though we have evidence for a *-ia* Dat. (*ka-na-pu-ia* URBS) and probably for an *-un* Acc. sg. (EQUUS *á-sù* - written before *-ha* or *-pa*). It is likely that the Dat. ended in *-wi*, the Abl. in *-wati* and the Dat. plural in *-wanza*, but given the vocalic ambiguity of the *wa/i* sign, this is impossible to decide. Moreover, there is a number of words which are not easy to classify;

evidence, it must be stressed, is far greater for the *-i*-stems than for the *-a*-stems.

| | <i>-i</i> -stems | <i>-a</i> -stems |
|-------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Sg. N. <i>-is</i> | (<i>tá-ti-i-sa</i>) (<i>Ika-ma-ni-i-sa</i>) | <i>-as</i> (AVUS- <i>há-sa</i>) (DEUS <i>kar-hu-há-sa</i>) |
| A. <i>-in</i> | (<i>tá-ti-na</i>) (<i>Ika-ma-ni-na</i>) | <i>-an</i> (AVUS- <i>há-na</i>) (DEUS <i>kar-hu-há-na</i>) |
| D. <i>-i</i> | (<i>tá-ti-i</i>) | ??- <i>a</i> (AVUS- <i>há</i> , DEUS <i>ku-AVIS-pa-pa</i>) <i>-aya</i> (DEUS <i>kar-hu-há-ia</i>) |
| | <i>-iya</i> (<i>Ika-ma-ni-i-ia</i>) | |
| G. <i>-asi</i> | (PÁNIS <i>tu + ra/i-pa-si-i</i>) | |
| | <i>-isi</i> (<i>Iku-hi-si-i</i>) | |
| | <i>-is</i> (<i>Ika-ma-ni-sa</i>) | <i>-as</i> (DEUS <i>ku-AVIS-pa-pa-sa</i>) |
| Pl. NA. <i>-inzi</i> | (<i>tá-ti-i-zi</i> , REX- <i>ti-zi</i>) | <i>-anzi</i> (AVUS <i>hu-há-zi</i>) |
| D. <i>-anza</i> | (REX- <i>tá-za</i>) | ? |
| | <i>-inza</i> (<i>tá-ti-za</i>) | |
| Sg./Pl. Ab. <i>-ati</i> | (CAPUT- <i>ta-ti</i> , DEUS- <i>na-ti</i>) | <i>-ati</i> (DEUS <i>kar-hu-há-ti-i</i>) ⁹⁹ |
| | <i>-iti</i> (DEUS- <i>ni-ti</i>) | |
| Gen. Adj. <i>-asis</i> | (<i>ta-ti-ni-ma-si-</i>) (CAPUT <i>há + ra/i-[ma-]há-si-</i>) | <i>-asis</i> (DEUS <i>kar-hu-há-si-</i>) |
| | <i>-isis</i> (<i>Iku-hi-si-sa</i>) (<i>Ika-ma-ni-si-sa</i>) | |

The general pattern is clear and closely follows that of Luwian, in spite of a few differences most of which are already well known¹⁰⁰. In the singular *-s* and *-n* of the Nom. and Acc. are added directly to the stem (as in Luwian). The Nom. Acc. plur. ending *-nzi* is also added directly to the stem. The terminations of the Gen. sg., the genitival adjective, the Dat. pl. and the Abl. appear to begin with an *-a-* vowel in front of which it is normal to delete the final *-i-* of the *-i*-stems. Thus we have forms like *turpasi* (Gen.), *harmahasi-* (Gen. adj.), REX-*tanza* (Dat. pl.), **mas(s)anati* (Abl.) from the stems *turpi-*, *harmahi-*, REX-*ti-*, **mas(s)ani-* etc. However, in a few cases the *-i-* is preserved:

it is possible, for instance, that of the two words for 'lord', which we believe ought to be distinguished in Hier. (DOMINUS-*na-ni-i-sa* and DOMINUS-*ia-sa*), the latter is a diphthongal stem (cf. the Gen. DOMINUS-*ia-i-sa*). The word for 'land' poses yet further problems.

⁹⁹ For the rhotacized forms of the ablative *-ari/-iri* see above 3.3.3. and below 4.2.1.3.

¹⁰⁰ In the singular the main difference is the frequent presence in Hier. of a genitive distinguished from the genitival adjective. In the plural Hier. has one form for the Nom. and Acc. *mf*, while Cun. Luwian (in spite of some hesitations) tends to use the same form for the Acc. and Dat.; Cun. Luwian distinguishes the Abl. sg. from the Abl. pl. (*-nzati*) while Hier. uses *-ati* for both purposes (except in the pronouns). For further details see Laroche, *DLL*, 135ff. and Kammenhuber *Handbuch*, 305ff.

the possessive adjective *amis* 'my', whose inflection follows that of the *-i*-stems, has an ablative *á-mi-ia-ti-i* and a Dat. pl. *á-mi-ia-za*. Here too the position is similar to that of Cun. Luwian where the genitival adj. regularly ends in *-assi-* (e.g. in *har-ma-ha-aš-ši-iš* from *harmahi-*) and the Abl. in *-ati* (e.g. in *har-ma-ha-a-ti*), but where we also find forms like *u-wa-ni-ia-ti* with the *-i*-preserved before the ending. The Hier. forms in *-iti*, *-isi*, *-is*, *-isis*, *-inza* etc. seem to be innovations, due in all likelihood to a tendency to clarify the paradigm introducing everywhere the *-i*- of the stem¹⁰¹.

4.2.1.1. Three case-forms, that of the Dat. and Gen. sg., and that of the Abl. deserve particular attention. In the *-i*-stems the normal ending of the Dat. sg. is *-i* (as in Cun. Luwian). The *-ya*-termination of both the *-i*- and the *-a*-stems was discussed most recently by Neumann (see above 1.10.3, n. 26) who pointed out the parallelism with the *-ya*-termination of Cun. Luwian (e.g. in *lu-ú-la-hi-e-ia*, *uruha-at-tu-ša-ia* etc.) and the *-ie*-termination of Lycian (e.g. in *M̃mije*, *Mañmahaje*). In Hier. it is remarkable that the *-ya* datives of *-i*-stems tend to appear in proper names only (personal names, gods' names, place names)¹⁰². For the *-a*-stems the problem is somewhat different. The *-ia*-ending is very well attested and the recently published lead strips from KULULU¹⁰³ have considerably increased the evidence. However there is also one instance of AVUS-*há* and two instances of *ku-AVIS-pa-pa* used as datives¹⁰⁴. It is difficult to know how to assess these few examples; if it were necessary to attribute to the Hier. *-a*-stems both an *-a* and an *-aya* ending of Dat. sg., this would not be unduly worrying, given the obvious parallelism with the *-i* datives of the *-i*-stems. At the moment it is probably wiser to suspend judgement on the matter and to wait for further evidence¹⁰⁵.

¹⁰¹ Another possible explanation is that some of the forms in *-iasi*, *-iati* etc. underwent a phonetic change and were replaced by *-isi*, *-iti* etc.

¹⁰² We have quoted above (note 98) an example of *-ia* dative from a *-u*-stem; there too the word was a city name.

¹⁰³ Özgüç, op. cit. (above n. 41). Cf. also the list of personal names and selected lexical items by E. Laroche, *ibid.* 115f.

¹⁰⁴ Meriggi, *Glossar*, 60 lists *†HUH-ha* as Dat. sg. in KARGAMIS A 2,2 and in LII. 3 (MARAŞ IV): in the latter case the first sign could be used logographically without a phonetic complement and *-há* could be the connective particle 'and', which seems to be required by the context. A similar explanation cannot apply to A 2,2, but here we may remember that in the same line the scribe has written *tá-ti-ia* instead of the expected *tá-ti-ia-za* and that in the line underneath the normal dative in *-ia* is found (*ka-tu-wa/i-ia*). The Dat. *ku-AVIS-pa-pa-ia* is well attested but *ku-AVIS-pa-pa* is found twice after (DEUS) *kar-hu-há-ia* (KARGAMIS A 11 b 6 and A 25 a 3,2). In the first instance it precedes (DEUS) *sa₅ + ra/i-ku*, which also does not seem to have the expected dative ending. For some cases of apparent omissions of case-endings see e.g. Hawkins, *An. St.* 22 (1972), 113.

¹⁰⁵ An additional problem is caused by the datives sg. in *-an* identified by Mittelberger, *Die Sprache* 9 (1963), 90f. The problem is not directly relevant to our readings, but we may notice that if there was any doubt about the existence or the correct interpretation

4.2.1.2. It has long been known that, contrary to Cun. Luwian¹⁰⁶, Hier. knew both a form (or, as we now see, two forms) of genitive, and a genitival adjective. The genitives should now be understood as ending either in *-s* or *-si*. It is probably too soon to make a statement about the distribution of these endings, but *-si* seems to show a definite preference for the *-i*-stems and the demonstratives¹⁰⁷. The vowel that precedes the ending is always *-a-* for the *-a*-stems but can be either *-a-* or *-i-* for the *-i*-stems.

The fact that we have both a Gen. ending in *-si* and a genitival adjective in *-sis* (in all respects parallel to the Cun. Luw. form) seems to support the old theory that there is a close relationship between the genitive and the adjective. This is confirmed by the observation that in the *-i*-stems those words that have an *-is* or *-isi* genitive also have an *-isis* (rather than an *-asis*) adjective¹⁰⁸.

4.2.1.3. We have mentioned above that the ablative termination also shows an alternation between *-ati* and *-iti* in the *-i*-stems. It is well known that these forms can also be replaced by the so-called 'rhotacized' endings: *-Ca + ra/i* (i.e. *-ari*) and *-Ci + ra/i* (i.e. *-iri*) (see above 3.3.3.). However, a problem seems to arise when after an *-a*-syllable (both in the *-i*- and in the *-a*-stems) the ablative ending is indicated by 𐀀 , i.e. by a ligature of the 𐀀 sign with the 'thorn' (= *ra/i*). As examples we may quote *á-pa-sa-𐀀* (vs. *á-pa-sa-ti*), DEUS-

of these forms, this must now yield before a series of new examples. Not only may we quote the form *pa-sa-na* recognized by Hawkins in BOYBEYPINARI I C (*An. St.* 20 [1970], 87f.; cf. also *ibid.* 22 [1972], 110 § 19), but also a large number of similar datives can be found in the new KULULU lead strips (cf. above n. 41 and n. 103). The important point is that in all these instances we are dealing with *-as(s)is* genitival adjectives which instead of the expected *-asi* Dat. sg. show an *-asan* form.

¹⁰⁶ It cannot be excluded that Cun. Luwian had a genitive as well as a genitival adjective, but the evidence is not sufficient to establish it with certainty.

¹⁰⁷ For a classical treatment of the Luw., Hier. and Lyc. genitives see Laroche, *BSL* 55 (1960), 155ff.; for Lycian in particular see Neumann, *Die Sprache* 16 (1970), 61f. For the two genitives of Hier. (*-s* and *-si*) cf. Mittelberger, *Die Sprache* 9 (1962), 77; *ibid.* 10 (1963), 77f.; *ibid.* 11 (1964), 68; a list of Hier. genitives, based on Meriggi's *Glossar*, is provided by Georgiev in *RHA* XXVI/81 (1967), 157ff. There does not seem to be any certain example of *-si* genitive from an *-a*-stem. Of the forms listed by Georgiev *á-sa-tu-wa/i-ti-ma-za-si-i* could well come from an original *-i*-stem **Astuwatiman-t-i-asi* (see below 4.5.2ff.), and (DEUS) *ku-AVIS-pa-pa-si* is likely to be a genitival adjective in the accusative in both of its occurrences (always before *-pa* or *-ha*). *ha + ra/i-ni-sá-si* has a Nom.-Acc. sg. neuter *harnisanza* (see below 4.2.2.) and a Nom.-Acc. pl. neuter *harnisa*: it could be a consonantal stem. Finally, there seems to be an example of *-si* genitive from a *-u*-stem, if we assume that the word underlying (DEUS) *BONUS-si* of KARATEPE is *wasu*. However, the form occurs among a number of *-si* genitives from *-i*-stems and is paralleled in the other version of KARATEPE by (DEUS) *BONUS-sa*, which is the only *-s* genitive in a series of *-si* forms. For the demonstratives see below 4.3.1.

¹⁰⁸ There is not sufficient evidence to support the converse statement, viz. that whenever we find an *-asi*-adjective we also have from the same word an *-as* or *-asi* (rather than *-is* or *-isi*) genitive.

na-|| (vs. *DEUS-na-ti-i*), *IUSTITIA-na-||* (vs. *IUSTITIA-na-ti*), *REX-ti-ia-||* etc. If we read *||* as *i+ra/i*, we come to have a number of ablatives which end, somewhat uncongruously, in **-airi*. Indeed, this fact may be used as an argument against the suggestion that the value of *||* is *i*. Yet, it soon becomes clear that the problem is not so simple. It is remarkable that, while in non-rhotacized ablatives the sequence *-Ca-ti* is quite frequent, the sequence *-Ca-||-ti* never appears¹⁰⁹. This fact, combined with alternations such as *LOQUI-há-||-ti/LOQUI-há-ti-i-ti*; *DEUS-na-||/DEUS-na-ti-i*; *tu-pi-||/tu-pi-ti-i* *u-za-||/u-za+ra/i-i*, suggests that in internal and final position the ligature of *||* and 'thorn' may be read not *i+ra/i*, but rather *ri+i* or *riⁱ*. In other words, the *i* of the ligature has the function of indicating the colour of the vowel that follows the *r*, thus eliminating the ambiguity between the two possible values *ra* and *ri*. For a similar phenomenon we may compare the sign *mu* (*HH*, no. 107) which was obtained by joining the *mi* signs (four strokes) to the bull's head (= *u*). Normally *mi* is written inside *u*, but originally it followed it (as in the Empire writing of the name Muwatallis).

4.2.2. So far we have ignored the neuter nouns and adjectives. The evidence is limited, and, except for the pronouns, we shall have to consider here all forms of neuters, including those of the consonantal stems.

As far as we can see the Nom.-Acc. pl. regularly ends in *-a* and this vowel is added to the final consonant of the stem; hence we have forms such as *á-ma* 'my' (from *ami-*), *OMNIS+MI-ma* 'all' (from *tanimi-*), *DOMUS-na* 'houses' etc. In a few cases the *-i*-stems seem to preserve the final *-i*: cf. *ha-li-ia* 'days', *SCRIBA(-)la-li-ia* 'words' etc.¹¹⁰. So far there is a complete parallelism with Cun. Luwian, but it is more difficult to understand the very rare forms in which *-a* and *-aya* seem to alternate: *MALUS há-ni-ia-ta₄* / *MALUS ha-ni-ia-ta₄-ia* (*KARATEPE* 60), *OMNIS+MI-ma* / *OMNIS+MI-ma-ia* (*KARATEPE* 77); *PUGNUS(-)lá-mi-tà-ia* (*KARATEPE* 96 and 131) does not fit in this category because *-ia* is always present and we do not know what the basic form of the stem is. It is possible that if we were able to check the text of the Karatepe inscription we should find that the signs are to be read differently or in a different order, so that the problem may not arise. At any rate the evidence is too scanty to be relied upon; if we mention it here, it is because we shall find some *-ia* neuters when talking of the pronouns¹¹¹.

¹⁰⁹ If we do not limit this rule to the forms which are strictly ablatival, an apparent exception could be the Dat. *za-i-ti* of *SULTANHAN* d, but a reading *za-ti-i* is equally possible. In *KULULU* II A 3 Meriggi reads *†i-a-ti* (i.e. *za-i-ti*) and attributes to the form an adverbial value. However, the second sign is not altogether certain and in any case a reading *za-ti-i* is once more possible (see also below n. 123).

¹¹⁰ The problem of *LONGUS+ra/i-ia* is more complicated because we are not certain whether we are dealing with an *-i-*, an *-a-* or a diphthongal stem; cf. the Cun. Luw. spellings *ara/i-*, *arai-* etc. (Laroche, *DLL*, 30).

¹¹¹ In a very few cases, all uncertain, we find forms in *-i* which could conceivably be Nom.-Acc. pl. neuter: cf. *CORNU sù?+ra/i-ni* (*ASSUR* g III 27), *DOMUS-ni* (*KAR-*

If in spite of some complications, the Nom.-Acc. plur. neuter seems to be relatively straightforward, the same cannot be said of the Nom.-Acc. sg.; this creates one of the most difficult problems of Hier. philology. Words which appear with the normal *-a* ending of the plural are written in the Nom.-Acc. sg. with a final 𐎶 . Hence we have forms such as $\acute{a}\text{-ma-}\text{𐎶}$, $ta_4\text{-n}\acute{i}\text{-ma-}\text{𐎶}$; DOMUS- $\text{na-}\text{𐎶}$; $tu\text{-wa/i} + ra/i\text{-s}\acute{a}\text{-}\text{𐎶}$ etc.¹¹². The traditional interpretation accepts the existence here of a Nom.-Acc. sg. of the type $\text{tama}\acute{i}$ which is not paralleled elsewhere. In some cases the problem is even more difficult: a reading $\text{t}\acute{a}\text{-t}\acute{i}\text{-ma-}\acute{i}$ of $\acute{a}\text{-t}\acute{i}\text{-ma-}\text{𐎶}$ 'name' makes one wonder not only about the origin of the \acute{i} , which does not appear elsewhere in the declension, but also about the fate of the final *-n-* of the stem, which is required by the etymology (cf. Hitt. *laman*, Lat. *nomen* etc.), and which does indeed occur in the indirect cases like $\acute{a}\text{-t}\acute{i}\text{-ma-n}\acute{i}\text{-i}$. In these circumstances to postulate an *i/n* alternation on the model of the *r/n* alternation of some Hittite and IE stems can hardly be helpful. It could seem that if we adopt the *za* value for 𐎶 and thereby acquire a series of Nom.-Acc. neuter singulars in *-za*, the problem remains just as difficult. Yet, forms like $\acute{a}\text{-ma-za}$ etc. are not entirely isolated. A closer examination of the evidence reveals that there are at least two cases of a Nom.-Acc. sg. neuter ending in *-sa*.

4.2.2.1. In the last part of the Karatepe inscription (Meriggi LXIX) we read: $wa/i\text{-}ta_4$ ARHA MANUS $i\text{-}ti\text{-}tu$ CAELUM (DEUS) TONITRUS- $hu\text{-}za\text{-}\acute{s}a$ CAELUM (DEUS) SOL- $za\text{-}\acute{s}a$ (DEUS) $i\text{-}\acute{z}a\text{-}\acute{s}a$ OMNIS- $m\acute{i}\text{-}z\acute{i}\text{-}h\acute{a}$ DEUS- $n\acute{i}\text{-}z\acute{i}$ $\acute{a}\text{-}pa$ REX- $hi\text{-}\acute{s}a$ $\acute{a}\text{-}pa\text{-}ha$ REX- na $\acute{a}\text{-}pa\text{-}ha\text{-}wa/i$ CAPUT- $ti\text{-}na$ 'Let the Sky God Tarhunzas, the Sun God of the Sky, Ea and all Gods destroy(??) that kingdom and that king and that man'. The Phoenician equivalent for REX- $hi\text{-}\acute{s}a$, which we have translated 'kingdom', is the abstract *mmlkt* and for REX- na 'king' the expected *mlk*. $\acute{a}\text{-}pa$ (i.e. *apa*, to be contrasted with $\acute{a}\text{-}pa\text{-}ha$ = *apan-ha*) is the neuter Nom.-Acc. sg. of *apas* and REX- $hi\text{-}\acute{s}a$ is obviously the neuter abstract noun in $-hi(t)-$ derived from the word for king. The expected Nom.-Acc. should end in $-hi$ after the dropping of the final dental of the stem (if this was ever there); here $-sa$ must be an added particle. A similar form, but less clear, because we are not certain about its meaning and the context does not prove that it is singular, is $ka + ra/i\text{-}pa(?) + ra/i\text{-}ta\text{-}hi\text{-}s\acute{a}$ of KARGAMIS A 15 b, 3.

GAMIS A 23.5), $\acute{a}\text{-t}\acute{i}\text{-ma-n}\acute{i}$ (BOYBEYPINARI IV 3 C), DOMUS- $n\acute{i}\text{-i}$ (ASSUR g IV 16). For some of the words concerned we also know the regular neuter pl. in *-a*, and we must remember the possibility that the $-i\text{-}$ forms just mentioned could morphologically be Datives sg. However, if it were true that we have a few $-i$ neuter plurals of *-n*-stems, we should compare the $-i$ Nom.-Acc. neuter pl. of Hittite, which show a preference for *r/n* stems (cf. Kammenhuber, *Handbuch* 304, with literature).

¹¹² In all likelihood the Nom.-Acc. neut. pl. $tu\text{-wa/i} + ra/i\text{-sa}$ is attested in SULTAN-HAN 7.

The second certain example of which we are aware is the word for 'statue', 'image': *ta₄-ru-ša*. It is clearly a Nom.-Acc. sing. as proved by the pronouns and adjectives with which it agrees (*za* and *á-ma-za*)¹¹³. The only oblique case attested occurs in KARGAMIS A 1 a 5, where we read (with Meriggi) CAPUT VAS-*ru-ti-i* ([†]TÊTE+VASE-DIEU-*ti-a* Laroche, *HH*, p. 7). This is sufficient to prove that the word is not an *-s*-stem. If CAPUT VAS-*ru-ti-i* (i. e. *taruti*) is a dative, as seems likely from the context, it is a *-t*-stem; if it were an ablative it would be a *-u*-stem; from an *-s*-stem we should expect a dative **tarusi* and an ablative **tarusati*. Either way, the Nom.-Acc. neuter sg. *ta₄-ru-ša* must be analysed as *taru* + a particle *ša*. If the original form was **tarut-*, *ša* must have been added here too after the dropping of the final dental.

4.2.2.2. It seems then that the Hier. Luw. Nom.-Acc. sg. neuter ends either in *-za* or in *-ša*, though forms like e.g. *á-pa* prove that this ending may also be absent (as happens, of course, in the case of the Nom.-Acc. sg. neuter of the demonstrative: *za* or *za-'*)¹¹⁴. If this is so, the parallel with Luwian is immediately apparent. In Cun. Luwian the Nom.-Acc. sg. neuter often ends either in *-za* or in *-ša*. The choice between the two terminations is apparently determined by the preceding sound: *-za* occurs after *-n-* and *-l-*, *-ša* after vowel and probably *-s-* and *-r-*. A few examples may be listed here. First we may mention the abstracts in *-hi(t)-* like *hu-u-it-wa-la-a-hi-ša*, Dat. *hu-i-it-wa-la-hi-ti*, *u-wa-ra-an-na-hi-ša* etc. (vs. *an-na-ru-ma-a-hi* 'strength', without final *-ša*); secondly we may compare neuters like *a-ad-du-wa-al-za* 'bad, evil' vs. *a-ad-du-wa-a-al* (neuter) and *a-ad-du-wa-li-iš* (common gender), *ha-an-ti-il-za* 'first' vs. *ha-an-te-le-eš* (common gender), etc. In a sequence like KUB XXXV 54 iii 22:

a[d-du-wa-al-za-pa-at-ta ú[-tar-ša ha]l-li-iš-ša
pa-r[a-at-ta-an-za a-ap-pa za-[ti p]ar-ni
*zi-l]a ni-iš a-ú-i-t[i]*¹¹⁵

it seems possible that *parattanza* is also a Nom.-Acc. sing. neuter meaning 'curse' or the like rather than an *-ants* Nom. of a word of the common gender¹¹⁶.

¹¹³ In KARGAMIS A 25 a 3, 3 we may restore *á]-ma-za* CAPUT VAS *tá-ru-sa pa-ti-i-* ANNUS *u-si ta₈-nu-wa/i]*; cf. *ibid.* A 32, 2.

¹¹⁴ It seems unlikely that in CEKKE A 4 *á-pa-sa-na* (*sic*, with Meriggi, *Manuale* II, 1 108 and not [†] *á-pa-sa-n*, i. e. *á-pa-si-na* as in Meriggi, *Glossar* 29) is Nom.-Acc. sg. neuter. An interpretation as Dat. sg. (see above note 105) seems far more satisfactory.

¹¹⁵ For the evidence bearing on the words and texts quoted cf. Laroche, *DLL*, and Otten, *LTU*.

¹¹⁶ Given the frequent obscurity of the Luwian texts, it is also possible that other forms ending in *-anza* should be taken as neuters rather than as Nom. MF in *-ants* or Dat.-Acc. pl. in *-anza*. Occasionally this could be supported by Hier. parallels; thus it is possible to wonder whether the Cun. Luw. *šar-la-at-ta-an-za* (see Laroche, *DLL*, 86) should not be compared with the Hier. *sa₅+ra/i-la-ta₄-za*.

The *-za/-ša* case of Cun. Luwian has long since been identified¹¹⁷, but in a recent list of corrections to his *DLL* Laroche (*RHA* XXIII/76 [1965], 44) has stated that in all occurrences in which he uses the formula 'cas en *-ša*' in his dictionary, this must be replaced by 'possessive enclitic neuter'. No reasons are given for this decision¹¹⁸, but, whatever the origin of the particle, it seems unlikely that we can argue that in Cun. Luwian it always had a real possessive value. If this were so, it would be difficult to see how in the long lists of substantives used in the rituals to indicate good or bad things only the neuters are affected by it, while the common gender nouns are not (cf. e.g. *KUB* XXXV 133 ii 29-30; 45 ii 22 etc.).

We can now return to Hier. Luwian. Here we find, as in Cun. Luwian, *-sa* after the abstract suffix *-hi(t)-* (*REX-hi-ša*). The Hier. *ta₄-ru-ša* has an obvious parallel (long since identified) in Luw. *ALAM-ša*, for which a parallel formula gives a fuller form *]uš-ša* which has rightly been compared with the attested *ta]-ru-uš-ša*, *ta-a-ru-u[š-ša* (cf. Laroche, *RHA* XXIII/76 [1965], 49)¹¹⁹. The Hier. *MALUS-za* is paralleled by Cun. Luw. *adduwalzu*. It is also possible to suggest—with some hesitation—that *parattanza*, if our interpretation is right, is the same word as the neuter sg. *LOQUI p]á? + ra/i-ta₄-za* of *KARGAMIS* A 27 ff 2 (for which cf. the Nom.-Acc. neuter pl. *pá? + ra/i-ta₄*)¹²⁰.

4.2.2.3. To conclude: this is not the place to try to find an explanation for the Luwian neuters in *-za/-ša*, but it is important to stress that, if our readings are accepted, Hier. offers a completely parallel phenomenon¹²¹. At

¹¹⁷ Cf. e.g. Otten, *Zur grammatikalischen und lexikalischen Bestimmung des Luwischen* (Berlin 1953), passim and especially 63, 70. It now seems clear that these forms are neuters sg. and not pl. as Otten thought. Cf. for the evidence Laroche, *DLL*, 138.

¹¹⁸ Though obviously Laroche has been influenced by his equation of Cun. Luw. *-ša* and Hitt. *-šet*. It is also possible that he had in mind the new Luw. texts published in *KBo* XII: *ibid.*, 260 ii 1-3 it seems possible to recognize an enclitic form *-ša-an* which could be a possessive adjective in the Acc. (Do the odd spellings of the type *ha-at-iu-ra-am-ša-an* etc., in the place of the expected *-an-ša-an* etc., reflect a wish to avoid the change of *-š-* to *-z-* after a dental nasal?).

¹¹⁹ However a problem arises if we follow Laroche (*RA* 55 [1961], 215; *BSL* 57 [1962], 31; *RHA* XXIII/76 [1965], 49) and recognize in Cun. Luwian a form *ta-ru-ša-an-ti-iš*, which can be interpreted as an *-anti-* derivative from a stem **tarus-* (Otten, *LTU* 60 tentatively read *ha¹-ru-ša-an-ti-iš*). The problem remains open, but the Hier. evidence is clear, while too many elements of obscurity remain in the Luw. evidence (e.g. is it certain that the supposed *tarušantiš* is related to *ALAM-ša* / *ta]-ru-uš-ša*?).

¹²⁰ The real question here is that the value of the first sign (*HH*, no. 462) is very doubtful.—For another example of Cun. Luwian neuter which may be interpreted thanks to Hieroglyphic see below note 163.

¹²¹ It is possible that Hittite too can offer a parallel for this type of formation. The Hitt. *šu-um-ma-an-za* 'rope' etc., which appears both as a neuter and as a noun of the common gender has long since been compared with Greek *ὑμῖν*. If this etymology is correct, as it seems, we are in the presence here too of an original neuter *-n*-stem re-determined with a *-sa/-za* suffix. (Cf. also Kronasser, *Etymologie der hethitischen Sprache*,

the same time some difficult linguistic problems may be solved: it is satisfactory to be able to state that obvious *-n*-stems like the word for 'name' keep the nasal all through their paradigm. 'Name' has a Nom.-Acc. sg. neuter *atiman-za* and all other forms are built on the stem *atiman-*. The connection with Cun. Luwian is made even clearer by an examination of the *-i*-stem neuters. If we take the Nom.-Acc. neuter sg. *á-ma-za* 'my' (plur. *á-ma*) as an example, we see that the final *-i* of the stem is deleted in front of the neuter ending *-an*; to this the particle *-za* is added to yield the form *amanza*. In Cun. Luwian too the *-i*-stem adjectives and participles have a Nom.-Acc. sg. neuter in *-an* (cf. Laroche *DLL*, 137): cf. e.g. the neuter *ki-ša-am-ma-an* from the *-mi*- participle of *kiša-*.

In Hier. Luwian it seems likely that this *-an* termination was extended to other stems—though here we have the usual difficulties in distinguishing between *-i*-stems and consonantal stems. However this may be, a form like *há + ra/i-ní-sà-za* 'fortress' must certainly be interpreted as *harnisan-za*. The problem is more complicated in the case of *DOMUS-na-za* (vs. the plural *DOMUS-na*): on the one hand we could read the word as *parn-za* and assume that the original athematic form was preserved; on the other hand we could think once more of an *-an* ending and read the form as *parnan-za* (on the model of *aman-za* vs. the plural *ama*). The second hypothesis seems intrinsically more probable, but at the moment cannot be proved.

4.3.1. A few words must be dedicated to the pronouns. Reading \parallel as *i* has an immediate consequence that the relative pronoun becomes a clear *-i*-stem, like the Cun. Luw. *kuiš*, with a Nom. MF REL-*i-sa* and an Acc. REL-*i-na* (cf. Cun. Luw. *kuiš*, *kuin*). The Nom. plur. MF is REL-*i-zi*, in all respects parallel to Luw. *kuinzi*. From an etymological point of view we should expect a Nom.-Acc. sg. neuter REL-*i* < **kwid* (though the Cun. Luw. evidence for this form is practically non-existent), and indeed REL-*i* does occur, but only as a conjunction. The Nom.-Acc. sg. neuter is REL-*à-za* with the usual *-za* particle, which we discussed above (4.2.2.3.). In all likelihood this is a new formation; we may read it either as **?hwan-za* or the like (cf. *aman-za*) or as

Wiesbaden 1966, I, 189f. §§ 107 and 199ff. § 111.) An even closer parallel to Hier. is offered by the *Glossenkeil* word *ku-wa-ja-am-ma-an-za* attested in *KBo* IV 14 II 12 after *me-e-hur*. It seems reasonable to accept the interpretation of Stefanini (*Rendiconti Acc. Lincei* 20 [1965], 39ff. especially p. 55), who sees in *kuwaḫammanza* a participle in agreement with *mehhur* 'time' and translates 'periodo d'angoscia'; the same phrase occurs in the dative in II 38-39 and 42-43 *ku-wa-ja-am-mi me-e-hu-ni* 'nel tempo dell'angoscia'. However Stefanini is obliged to argue that *kuwaḫammanza* is a conflation of the *-mi*- participle of Luwian with the *-ant*- formations of Hittite, and that there is no gender agreement between *mehhur* (neuter) and the participle (MF). This is surprising in view of the correct grammar of the phrase when it occurs in the dative. However, if we take *kuwaḫammanza* as a neuter participle to which the *-za* particle has been added, there is no problem left and we have an exact Cun. parallel for our Hier. forms.

?*hwin-za* or the like, according to the value that we attribute to the middle sign (cf. above 3.4. and n. 94). The Nom.-Acc. neuter pl. is *REL-ia*, with a final *-a* as in the nominal declension.

Of the two demonstratives of Hier. Luw., one—*á-pa-sa*—has always been compared with the identical form of Cun. Luw. *apas*. The second used to be read **i-sa* and remained unparalleled in Anatolian. The new reading *za-* brings this pronoun too in line with Cun. Luwian and with its demonstrative *za*.¹²² The declension of the demonstratives does not cause particular problems, but unfortunately the Cun. Luw. evidence is not always available for comparison. The Nom. sg. MF *á-pa-sa* and *za-sa* are the expected forms, and so is the Acc. *za-na*.¹²³ The Acc. *apan* does occur, but always before an enclitic particle which begins with a consonant, so that the final *-n* is not written.¹²⁴ The Nom. pl. MF forms are *á-pa-zi* and *za-(á-)zi*; the latter form differs from Cun. Luw. *zinzi* but once more this looks like an example of regularization of the paradigm.

Some forms are typical of a pronominal declension; the datives sg. *(á-)pa-ti(-i)* and *za(-á)-ti(-i)* are paralleled in Cun. Luwian; the Dat. pl. *(á-)pa-ta-za* and *za-ti-ia-za* are clear innovations built on the singular. There is also some evidence for the Gen. sg. *za-si* and the two forms *(á-)pa-sa*, i.e. *apas*, and *pa-si-i-* (one instance only).¹²⁵

The Nom.-Acc. sg. neuter is also typical of the pronominal declension. There is at least one example of *á-pa* in the Karatepe inscription (phrase LXIX; see above 4.2.2.1.) and one of *pa-* in KARGAMIS A 1 a 6¹²⁶; *za*, which may be compared with Cun. Luw. *za-a*, is well attested. For *apas*, the Nom.-Acc. pl. neuter is almost certainly *(á-)pa-ia*; for *zas* it is certainly *za-ia*.¹²⁷ We cannot

¹²² This was of course one of the arguments that induced Bossert to propose the value *za* for 𐎶 . For a comparative analysis of the Anatolian pronouns see Laroche, *BSL* 55 (1960), 174ff. For the demonstrative pronoun cf. also M. Scheller, *IF* 69 (1964), 39ff.

¹²³ However, in KARGAMIS A 1, 4 we find an Acc. sg. *za-i-na*, which is matched by a Gen. sg. *za-i-si-i* in KARATEPE 287 (if the reading is correct; the other version has *za-si*). In view of adverbial forms like *zin*, and of the Cun. Luw. *zinzi* we may wonder whether we should accept the possibility of an alternation *za-/zi-/zai-* in the stem of the pronoun (cf. also n. 109).

¹²⁴ A possible, but doubtful, exception is the form *pa-na-* of KARGAMIS A 1 a 5; cf. Hawkins, *An. St.* 22 (1972), 110 § 34.

¹²⁵ *(a)pas* (written *(á-)pa-sa* or *(á-)pa-ša*) is the most common form of Gen., but *pa-si-i-* is also attested: cf. ADIYAMAN I 4, where, contrary to what was stated in Hawkins, *An. St.* 20 (1970), 105, we now take this form as genitive of the pronoun rather than as Acc. sg. neuter of the possessive adjective.

¹²⁶ For this example see Meriggi, *Manuale* II 1, 116, where *pa-* is translated in a way that seems to imply an interpretation identical to that given above, and Hawkins, *An. St.* 22 (1972), 111 § 36–37. The form *á-pi* frequently attested in the Assur letters remains mysterious, but should be considered together with the other (rare) forms built on an *ápi-* stem, which reveal some hesitations in the morphology of this demonstrative (cf. above n. 123 for a similar problem which arises apropos of *zas*).

¹²⁷ For the evidence cf. Meriggi, *Glossar* 27, 65ff., and especially Mittelberger, *Die Sprache* 9 (1963), 96ff.

spend too much time on these forms—and it is unfortunate that Cun. Luwian does not provide any clear evidence for the Nom.-Acc. pl. neuter of the demonstrative pronouns. However, two points are relevant. First, it is remarkable that the *-ia* ending of *apaya* and *zaya* is identical to the *-ia* termination of the relative pronoun REL-*ia*. It is not likely that this form was inherited as such from Indo-European, or even from Proto-Anatolian, but, as we have seen, it is easy to understand how it arose, if we think of the nominal declension: for a similar development we may compare e.g. Latin *quia* and the Greek dialect forms (ἄ)ττα, τᾶ, σᾶ < **k^wia*. Secondly we cannot forget that if Cun. Luwian does not offer any relevant evidence, Lycian does. The Nom.-Acc. pl. neuter of *ebe* (the Lycian equivalent of *apas*) is *ebei^{ja}*, i.e. the exact counterpart of *apaya*. At this stage one thing seems clear: *zaya* and *apaya* (just like Lycian *ebei^{ja}*) are innovations; the immediate model may have been the ending of the relative pronoun and a more remote model may have been provided by the ending of the *-i*-stem neuter nouns. We do not have sufficient evidence to establish how old these innovations were¹²⁸. We could speculate further, but we soon come across our main difficulty; we do not know for certain what the inherited form of the Nom.-Acc. pl. neuter of the pronouns was. If we could reconstruct an original **apa* or **za* we could then point out that Hier. Luwian, as opposed to Hittite, tends to avoid homonymy between neuter sg. and plural, so that this can have been a starting point for the innovation. On the other hand we must try to fit into the general pattern the Hittite forms *ape*, *ke* etc. which are identical to the Nom. pl. of the common gender. Once more, it is wiser to refrain in this context from a discussion which would require a full reconstruction of the pronominal forms of Proto-Anatolian and indeed of Indo-European.

4.3.2. It is impossible to offer here a detailed discussion of the evidence bearing on the forms of the personal pronouns. The existence of the forms *á-mu* and *mu* for 'I, me' and *á-mi-i-sa*/*mi-i-sa* for the possessive adjective 'my' is well established. Less well attested but still clear are *ti-* for 'thou' and *tu-wa/i-* for 'thy'. More important from our point of view are the forms of the pronouns of 1st. and 2nd. persons pl. The evidence is complicated but has been collected and thoroughly discussed by Meriggi in *Manuale* I 47ff.

The last part of the Karatepe bilingual and the Assur letters yield an enclitic form of the 1st. pers. pl. pronoun: *-i* in the current transcription, *-za* in our transcription. The pronoun occurs only after particles which end in *-a*, so that a reading *-aza* or *-anza* is also possible. The possessive adjective *á-zi-sa* attested in the Assur letters (f ii 9), guarantees that, at least in the free forms, this pronominal root began with an *a*-vowel. It seems likely that the free form

¹²⁸ It is possible, of course, that similar innovations arose independently in Lycian and in Hier.; in the absence of any clear evidence from Luwian the question cannot be settled.

à-𐎶-za 'to us' is also related, though the exact value of the second sign is still doubtful¹²⁹. However this may be, we have gained a root *az-* or *anz-* for the 1st. pers. pl. pronoun; this immediately recalls the Hitt. *anzaš*, *anzel* etc., i.e. the indirect cases of the 1st. person pl. pronoun. Even more important is the comparison with Cun. Luwian where Meriggi has independently recognized a form *an-za-*, 'to us', which occurs in sufficiently clear contexts¹³⁰.

For the second person pl. Carruba has pointed out that Cun. Luwian has a form *u-za-aš*, which alternates with a nasalized *u-un-za*¹³¹. In Hier. it is possible to identify contextually a possessive adjective *uzi-* or *unzi-* (Acc. *u-zi-na*, Abl. *u-za-𐎶*). Also attested are two free forms *u-𐎶-sa* and *u-𐎶-za* (Dat. plur.?) which are likely to be related to each other and to the possessive adjective, in spite of the usual reservations about the second sign. The enclitic *-ma-za* 'to you' is not relevant here, since it is obviously taken from the 3rd. person pronouns (cf. Hitt. *-smas* 'you' and 'them'). Once more, while the current transcriptions (e.g. *†ais* and *†uis* 'our' and 'your') attribute to Hier. forms which remain isolated within an Anatolian (and IE) context, the new readings allow us to make sense of these forms and to establish a closer link with Cun. Luwian than had hitherto been possible.

4.4. The verbal inflection has been mentioned above apropos of the problems caused by scriptio plena (cf. 3.3.2. and 3.5.). Here we can only list some of the basic endings in the new readings. In the present we now have a 1st. person sg. in *-wi* (cf. *i-zi-i-wa/i-i*, *ta₄-nu-wa/i-wa/i-i*¹³², *pi-pa-sa-wa/i-i* etc.), a 2nd. person sg. in *-si* (cf. *VIA-wa/i-ni-si*, *wa/i-mi+x-si*), a 3rd. pers. sing. in *-ti* (cf. *tà-ti-i*, *PES-wa/i-ti-i* etc.), and, if we accept Mittelberger's reading, a 2nd. person pl. in *-tani* (cf. *MAGNUS-ra/i-nu-wa/i-ta-ni-i*)¹³³. It is hardly necessary to recall that the corresponding Cun. Luw. endings for the singular are *-wi*, *-si*, *-ti*¹³⁴.

More important is that, by reading 𐎶 as *i*, we acquire a new interpretation of the so-called subjunctive forms¹³⁵. It is well known that these are 3rd.

¹²⁹ For this sign (*HH*, no. 432, 2) Meriggi (*Glossar*, 224) suggests tentatively a value *wi*, while Laroche thinks of a value *zu*?. If it were possible to think of a *z-* value (a suggestion of this type is already in Forrer (op. cit. in n. 7, p. 30), who reads the sign as *zi*) we would be able to recognize in the free form of the pronoun of first person a stem *anz-* followed by the usual *-nza* ending of Dat. pl. A similar interpretation would be possible for the second pers. pl. pronoun, which could be read as *unz-*.

¹³⁰ Meriggi, *Athenaeum* 35 (1957), 60; cf. also Carruba's article quoted below n. 131.

¹³¹ Cf. O. Carruba, *Die I. und II. Pers. Plur. im Luwischen und im Lykischen*, *Die Sprache* 14 (1968), 13ff. Carruba collects the evidence for the 1st. and 2nd. pers. pl. pronouns in Luwian, and points out some of the advantages that would arise in the comparison of Hier. and Cun. Luwian from Bossert's *za* reading of 𐎶 (see especially p. 22).

¹³² Cf. above, 3.3.2.

¹³³ Cf. Meriggi, *Manuale* I, 64; for the Cun. Luw. endings of 1st. and 2nd. pers. pl. see also Carruba's article quoted above n. 131.

¹³⁴ Laroche, *DLL* 142.

¹³⁵ Meriggi, *Manuale* I, 64.

persons sg. which alternate with the normal *-ti* forms without any apparent semantic difference. In the current transcription they end in *-a* (i.e. [†]*-Ca-a*); in our transcription they regularly end in *-i*. Hence we have forms like *i-zi-sa-ta-i*, *mu-wa/i-i*, *pa-za-i*, *pi-ia-i*¹³⁶ and *DARE-i*, *pi-pa-sa-i*, *tà-i*, *ta₆-i*, *tu-wa/i-i*, *u-pa-i* etc. It is easy to compare forms like Cun. Luw. *mu-u-wa-i* and Hitt. *pa-i*, *da-i* etc.; in fact the advantages of this reading are obvious; for a criticism of the subjunctive theory, cf. e.g. Neumann, *IF* 69 (1964), 59, and Kammenhuber, *Handbuch* 251. There remain a few verbal forms written with a final 𐎶 : in our transcription *PONERE-wa/i-ia*, *wa/i+ra/i-ia-ia*, *pi-pa-sa-ia*, *tà-ia*, *ta₆-ia*. If compared with the *-i* and *-ti* forms they are much rarer, but there is no doubt that they create a problem, even if in a few cases they may turn out to be due to misreadings or misinterpretations of the texts.

At this stage any attempt at an explanation would be premature, but we may wonder if in some cases a sequence of the type *-Ca-ia* may stand for [-Cai]. A possible parallel within Hier. would be the alternation between *wa-* and *u-*, e.g. in *wa-si-na-sa-ti* vs. *u-si-na-si-zi-i*, two forms preceded by the same logogram¹³⁷.

4.5.1. The line of demarcation between nominal and verbal inflection and nominal and verbal derivation or formation is never easy to draw. We shall start here with some notes about noun formation, but inevitably we shall also have to come back to some points which concern noun inflection.

It has been pointed out before (4.2.1.) that the new readings considerably clarify the distinction between *-i-* and *-a-*stems. Here it may be added that in the case of at least three suffixes we acquire a series of formations which are closely parallel to those of Luwian. Thus, as in Cun. Luwian, we find adjectival genitives in *-(a)s(s)is* (e.g. *à+ra/i-ta₄-la-si-sa*, *su-hi-si-sa*, *CAELUM-si-sa*), participles in *-mis* (e.g. *pi-ha-mi-sa*, *tara/i-pa-mi-i-sa*), and ethnics in *-wan(n)is* (e.g. *à-tana-wa/i-ni-i-sa*, *na-hi-ti-ia-wa/i-ni-sa*). The current transcription is obliged to take all these derivatives as *-a-* or *-ia-*stems in contrast with the *-sis*, *-mis* and *-wannis* forms of Cun. Luwian.

4.5.2. A few Hier. words are formed or re-determined with a suffix indicated by the sign 𐎶 ; the normal endings follow. We have ethnics like *kar-ka-mi-si-za-sa/* [*ka*]r-ka-mi-sà-za-sa, *sù?-[ki-]ta₄-za-sa* and nouns and adjectives like *PUER ni-mu-wa/i-za-sa*, *MAGNUS+ra/i-za-sa*, *sa-na-wa/i-za-sa* etc.

At this stage we must also consider the name of the Storm God, for which we have a Nom. (DEUS) *TONITRUS-hu-za-sa* (i.e. *Tarhunzas*). There is

¹³⁶ *pi-ia-i* is repeatedly written, always in this form, in the newly published lead strips from KULULU (see above nn. 41 and 103).

¹³⁷ Outside Hier. the syllabic script used for classical Cyprian offers an interesting example of the spelling *o-wo-* for Gr. *οὐ*, which is elsewhere written *o-u-* (cf. O. Masson, *Les inscriptions chypriotes syllabiques*, Paris 1961, 248f.). However, we may have here a distinction parallel to that between alphabetic Greek *ὠτός* and *ἄτρός*.

little doubt that the ethnics and adjectives just mentioned belong to a somewhat different category from that of *Tarhunzas*, but the two classes have something in common. *Tarhunzas*, as we shall see, has *-za-* forms only in the Nom. and Acc.; the ethnics and adjectives are more consistent in their inflection, but it is clear that alongside the *-za-* forms there are also forms without any *-z-* element. Thus, *sa-na-wa/i-sa* alternates with *sa-na-wa/i-za-sa*; the Nom. and Acc. MAGNUS + *ra/i-za-sa*, MAGNUS + *ra/i-za-na* alternate with a Nom.-Acc. neuter pl. MAGNUS + *ra/i-ia*. Obviously the current transcription recognizes in all these forms [†]*-i-* derivatives, and attributes to [†]*-i-* the same properties which we attribute to *-za-*. The problem then is whether it is possible to make linguistic sense of these processes of suffixation, and in particular whether a *-z-* element can be paralleled and understood within the general context of Anatolian languages.

4.5.2.1. We must consider first the name of the Storm God. From Cun. Luwian we know for certain that we are dealing with an *-nt-* stem: Cun. Luwian has a Nom. ^a*Tar-ḫu-un-za* (i.e. *Tarhunts*), a Dat. ^a*IM-un-ti* (i.e. *Tarhunt-i*), and a genitival adjective *Tar-ḫu-un-ta-aš-ši-*. In Hier. the indirect cases show a very similar pattern: Dat. (DEUS) TONITRUS-*hu-ti-i* (i.e. *Tarhunti*), Abl. (DEUS) TONITRUS-*hu-ta-ti-i* (i.e. *Tarhuntati*), Gen. (DEUS) TONITRUS-*hu-ta-sa* (i.e. *Tarhuntas*). However, the Nom. and Acc., as we have seen, show *-za-* forms: the Nom. ends in *-hu-za-sa* and the Acc. in *-hu-za-na*. It could be just possible to argue that *-hu-za-sa* is an odd spelling for *-hunts*, but this argument could not apply to the Acc. where we should expect a form **Tarhuntan*¹³⁸.

Whatever transcription we adopt, we must acknowledge that the name of the god offers an heteroclite declension. However, if we think in terms of a Nom. *Tarhunzas* and an Acc. *Tarhunzan* (rather than of a Nom. [†]*Tarhuīs* and an Acc. [†]*Tarhuīn*) it is not too difficult to understand how this came about. We know that the stem *Tarhunt-* is an extension of an original *-u-* stem; the *-nt-* suffix is well known in Anatolian and requires no further comment¹³⁹. We also know that in Cun. Luwian and in Hier. *-nt-* is often extended through another suffix *-i-*. Thus we have forms like Cun. Luw. *tiyammantiš* 'earth', *tappassantiš* 'sky', Hier. CAELUM *ti-pa-sa-ti-sa*, TERRA *ta-sà-REL + ra/i-ti-sa*¹⁴⁰. In Hier. the Gen. (DEUS) TONITRUS-*hu-ti-i-sa* (i.e. *Tarhuntis*) shows that the name of the Storm God also received a similar extension. Hence we must reckon both with a stem *Tarhunt-* and a stem *Tarhunti-*. In Cun. Luwian we find that *-i-* stems have accusatives ending both in *-in* and in

¹³⁸ This has been in the past one of the main objections raised against the *za* value of [†] proposed by Bossert: cf. e.g. Kammenhuber, *Handbuch* 285f. and Mittelberger, *Die Sprache* 9 (1963), 85, n. 40.

¹³⁹ For the *-nt-* suffix in general cf. Laroche, *BSL* 57 (1962), 23ff.; for the name of *Tarhunts* in particular see Laroche, *RHA* XVI/63 (1958), 88ff.

¹⁴⁰ For these Hier. forms of the words for sky and earth (both attested in BOYBEY-PINARI) cf. Hawkins, *An. St.* 20 (1970), 95.

-*ian*. If so, we can postulate for the stem *Tarhunti-* an Acc. **Tarhuntian*. At this stage it does not seem too far fetched to suggest that a cluster *-tia-* yielded a sequence of *sibilant + vowel*. After *-n-* the sibilant should only appear as *-z-* (see above apropos of the neuter sing. in *-za*: 4.2.2.2-3), so that our change could be expressed by the formula *-ntia- > -nza-*. We would then have an Acc. *Tarhunzan*, which could be used as a model for the Nom. *Tarhunzas*¹⁴¹.

Not only is this reconstruction plausible in itself; the supporting evidence is also impressive. First of all, it seems that Cun. Luwian too had, alongside the form *Tarhunts*, another form ending in *-as*, at least if we are to judge from the attested Nom. ^aU-*aš* (cf. Laroche, *DLL*, 127).

Secondly, a Hier. parallel to the suggested formation and sound change is provided by the name of ^aLAMA, the Hier. (DEUS) CERVUS. From the personal name HALPA-*ru-ti-i-ia-sa* (i.e. *Halparuntiyas*), which corresponds to the Ass. *Qalparunda*, we learn that at some stage the god's name was *Runtiyas*. But in KARATEPE we find a form (DEUS) CERVUS-*za-sa* which we understand as *Runzas* (< *Runtias*), and which we can compare with the Greek *Ῥωνδα-*, *Ῥωνδι-*, *Ῥωνζα-*¹⁴².

Thirdly, the change *-(n)tia- > -(n)za-* presents no phonetic difficulties and can be easily paralleled from other languages. Admittedly, it is well known that Cun. Luwian, Hier. and Lycian did not share the Hitt. change *-ti- > -zi-*, but this does not imply that there was no change *-tiV- > -zV-* in these languages. We have already mentioned the phonetic evolution of the name of Stag God in Hier., but we can also quote the name of the city of Malatya. As we have seen (2.3.6.1.) this appears as ^{ur}*mi-li-di-a* in the inscriptions of Tiglathpileser I, but as *mlz* in Aramaic. The Hier. form is *ma_z-li-zi*. For Lycian we may turn to forms like *hrzzi* 'upper' (cf. Hitt. *šarazzi-*), which, as is generally agreed, shows a *-zi* development of an original **-tjo-* suffix¹⁴³.

¹⁴¹ The name of the Sun God raises a similar problem. In Luwian, the name appears as *Tiwaz* in the Nom., as ^aUTU-*an* in the Acc., and as ^aUTU-*ti-i* in the Dat. In Hier. we find a Nom. (DEUS) SOL-*wa/i-za-sa*, a Dat. (DEUS) SOL-*ti* and an Abl. (DEUS) SOL-*ta-ti*. Interestingly enough a new reading (by Hawkins) of TELL AHMAR II 5 A offers an Acc. (DEUS) SOL-*wa/i-ti-i-na* (*Tiwatin*). It then looks as if, here too, an earlier consonantal stem had been replaced by an *-i*-stem. However, it is not easy to establish whether the Nom. should be read as *Tiwats* (if it was possible to write *-za-sa* for *-ts*) or *Tiwazas* or even *Tiwanzas*. The latter two suggestions would of course imply that the name was remodelled on that of the Storm God. It may also be pointed out that a form ^t*Tiwats* of a dental stem *tiwat-* (with which cf. for instance Hitt. *šiwatt-*) would certainly be no easier to explain.

¹⁴² For these forms and for the whole history of the name of the Stag God, cf. Ph.H.J. Houwink ten Cate, *The Luwian Population Groups of Lycia and Cilicia Aspera during the Hellenistic period* (Leiden 1965), 128-131.

¹⁴³ For Lyc. *hrzzi* cf. H. Pedersen, *Lykisch und Hettitisch* (Copenhagen 1949²), 74; and Houwink ten Cate, op. cit. (in n. 142), 61f. (with the relevant literature). For the *-tjo-* origin of *-zi* see Lohmann, *IF* 51 (1933), 319ff.; and for Hitt. *-zi* Kronasser, op. cit. (in n. 121), 168 § 97. A problem which we have not tried to solve, or even to pose, is whether

4.5.2.2. We turn now to the ethnics and adjectives mentioned above (4.5.2.). Let us first look for Anatolian parallels. Here we find that in Cun. Luw. ^{uru}ta-ú-ri-ši-iz-za-aš seems to be the ethnic corresponding to the city name Taurisa, just as ^aZarnizza is an ethnic derived from ^{uru}za-ar-ni-ia (Laroche, *DLL*, 175). Similarly in Lycian there is a highly productive -zi- suffix which appears in ethnics like *Atānazi*, *Sppartazi*, *Surezi* etc. The same suffix is used in a large number of adjectives; we have mentioned *hrzzi* 'upper'; here we can give as an example *prñezi*, obviously built on the Anatolian word for 'house'¹⁴⁴. As far as the use of the -z- element is concerned, then, Hier. seems to occupy an intermediate position between Cun. Luwian and Lycian: the -z- suffix is more frequent than in Luwian, less frequent than in Lycian.

It is perhaps possible to proceed further and wonder—in a somewhat more speculative mood—about the origin of the suffix. We have pointed out already that in some adjectives the suffix does not appear consistently through the whole inflection, and we have given as an example (cf. 4.5.2.) the adjective for 'great'. If we now look at Cun. Luwian we find that here too the adjective for 'great' shows some irregularities; a simple *ura-* appears in compounds (e.g. ^{1u}ra-^aU: cf. Laroche, *DLL*, 102), but a Nom. *u-ra-az* is also attested and, though the text in which it appears is broken, we also know of a form *u-ra-az-za-a*[š] (cf. Laroche, *DLL*, 102). There is no doubt that *u-ra-az* must be understood as *urant-s* with the well known -nt- extension (the -z- is due to the combination of the final -t- of the stem with the -s of the nominative). *urazzaš*, which reminds us of the ethnic *Taurišizza-* and *Zarnizza* quoted above, causes more difficulties. The obvious explanation is that it stands for **uranzas* and that the -n- was either not written or assimilated to the -z-. If so, it would be possible to establish even for Cun. Luwian a close connection between the -nt- and the -za- suffixes. This needs not be based on a single example. From Laroche's studies we know of a series of proper names, like *Zidantas*, *Nananta* etc., which seem to be Luwian in character. Most of them show alternative forms in -anza-. Thus, alongside *Zidanta-* we have *Zidanza-* (Acc. *zi-da-an-za-an*), alongside *Na-na-an-ta* we have *Na-ni-ia-an-za-aš* etc. -anza- cannot be understood as -ants; we are bound to take it as a regular termination to which the

the Hier. treatment of -tiV- was always -zV- or whether the presence of the -z- was in some cases due to the preceding -n- or to other factors (e.g. the original nature of the dental). Yet, it seems likely that sometimes the post-vocalic cluster -tiV- yielded -sV-; cf. N. van Brock, *Glotta* 46 (1968), 117–121, where it is convincingly argued that Hier. and Cun. Luw. *us(s)i-* 'year' goes back to an earlier **utja-* (< **ut-jo-*) and that the Hier. verbs *usi-* 'to build' and *usi-* 'to bring' both derive from roots which ended in dental and were redetermined with a -ya- suffix. The relationship between Hier. and Cun. Luw. -s- and -z- will bear further inquiry.

¹⁴⁴ Cf. Pedersen, op. cit. (n. 143), Houwink ten Cate, op. cit. (ibid.). Laroche, *RHA* XXIII/76 (1965), 52–54 discusses this Anatolian stem and points out (ibid. 53) that in Lycian the word *prñezi* (= οἰκῆος) cannot continue a Luw. **parnassi-* because if so we should expect **prñehi-*.

case endings are attached. What caused this *-nta/-nza-* alternation? Laroche states correctly¹⁴⁵ that 'on ignore les conditions précises de cette assibilation'. Yet it is difficult to doubt that the two forms are etymologically connected.

It is now clear at what we are aiming: our suggestion is that the *-za-* (or *-nza-*) suffix of Hier. is closely connected with the *-nt-* suffix which is well known in the whole of Anatolian and is particularly frequent in Luwian. This might explain, for instance, why this suffix tends to appear in some inflectional forms (like the nominatives) and is optional in others; in Luwian *-nt-* behaves exactly in the same way. Moreover we have evidence from Hier. that *-nt-* (or rather *-nti-*) was indeed used to form derivatives of nouns: in the phrase *VIR-ti-ia-ta-za* DEUS-*ní-za* 'to the male Gods' (KARGAMIS A 11 b 6) we can only recognize an adjective *ziti-ant-anza* (Dat. pl.) derived from *ziti-* 'man'. The corresponding Acc. sg. *VIR-ti-ia-ti-i-na*, i.e. *zitiántin*, is attested in KARGAMIS A 11 c 4 and shows that we are dealing with an *-i-*stem. It would be rash at this stage to try to give an exact account of why *-nt-* was replaced by *-za-*, but we may at least remember that for the name of the Storm God we postulated a series of developments through which an original form in *-ntis* was altered to *-nzas* (cf. 4.5.2.1.). It does not seem impossible that this or a similar development may also account for the *-za-* suffix of Cun. Luwian and Hier. and perhaps for the *-zi-* and *-za-* suffixes of Lycian¹⁴⁶.

4.5.3. The new readings impinge but little on the problems of verbal formation and derivation. Yet one point is worth making. By reading \ddot{z} as *za*, we obtain a number of verbal forms whose stem ends in *-za-*. We may quote a few examples:

á-za- (The imperative *á-za-tu* appears in curses after adverbs; in one case the subject seems to be the 'race' of the dogs of Kubaba and a meaning such as 'devour' seems suitable).

há-pa-za- (cf. *há-pa-za-nú-wa/i-tu-u* of KULULU I 4 B, where this imperative has for subject Tarhunzas and for object the *à+ra/i-ta₄-l[i-i?]-na* of the accursed man¹⁴⁷).

IRA-lá-za- (*IRA-lá-za-tu* [and *IRA-za-tú-u* are attested¹⁴⁸; *IRA(-)sa-lá-sa-tu* and *IRA-lá-sa-tu* are parallel forms).

¹⁴⁵ Laroche, *Noms* 329.

¹⁴⁶ The problems caused by the phonetic development have been discussed above (n. 143). Apropos of Lyc. *prānezi* we may also point out that since Cun. Luwian offers clear evidence for a stem *parnant-* of the word for 'house', it would be possible to derive it from **parnantio-*. However, in Lyc. *-zi* could derive from *-tio-* and we could reconstruct an earlier **parnatio-*; the only problem would then be that we would have to explain the *-a-* which immediately precedes the suffix.

¹⁴⁷ In *Glossar* 50 Meriggi reads **ha-pa-i-nú-wa-tu-u*, but *-i-* (instead of the expected **i*) is certainly due to a misprint; cf. *Manuale* II 1, 51.

¹⁴⁸ For the reading *IRA-za-tú-u* in KARGAMIS A 14 a 6 (where Meriggi, *Glossar* 104 has **22-i-t[u]-u*) see Hawkins, *An. St.* 22 (1972), 98.

(PES) *pa-za-* (*pa-za-i* and (PES) *pa-za-há* are both attested; cf. (PES) *pa-* and the causative *pa-nu-?*).

(IUSTITIA) *tara/i-wa/i-na-za-* (cf. (IUSTITIA) *tara/i-wa/i-i-na-za-ta₄-* 'judged' or 'made a judge'; see the substantive *tara/i-wa/i-ni-sa* 'judge').

(CRUS) *ta₄-za-* ((CRUS) *ta₄-za-tu* is attested in Karatepe; cf. also *ta₆-* and see below).

(BONUS) *wa/i-sà-za-* (cf. (BONUS) *wa/i-sà-za-ha* 'I did good' and see *wa/i-su-u* 'well, good').

PES(-) *wa/i-za-* (cf. PES(-) *wa/i-za-há*, PES(-) *wa/i-za-tá* etc.).

wá/i-li-ia-za- (*wá/i-li-ia-za-ta₄* is attested: cf. *wá/i-li-ia-* and *wa/i-li-ia-nu-*).

The origin of these forms poses a problem—and this is certainly made no easier, but, if anything, harder, by the current transcription of 𐎶 as t^{h} . It is unlikely that all verbs quoted must be explained in the same manner. In the case of *á-za-*, for instance, Cun. Luw. *azza-* 'devour' offers an easy term of comparison. Both in Hier. and in Cun. Luwian we have an iterative from the root *at-* 'to eat', to which the 'iterative' suffix *-(s)a-* (the Hier. and Cun. Luw. equivalent of Hitt. *-šk-*) is added¹⁴⁹.

Other cases may be different; if the verb meaning 'to be angry' *IRA-lá-za/IRA(-)sa-lá-sa-* is indeed connected, as Laroche suggests, with Hitt. *harsallant-*, it seems likely that the verb is a denominative built with a *-ia-* suffix on an *-nt-* stem. We could then assume that the change discussed above (*-ntia- > -nza-*) took place here too. The same explanation could account e.g. for *tara/i-wa/i-na-za-*, if we could argue that the verb is built on an *-ant-* by-form of the noun *tara/i-wa/i-ni-* 'judge'.

However, there are verbs in which we must recognize an independent suffix *-za-*; no other explanation, for instance, seems to justify the alternation between *pa-za-*, *pa-* and *pa-nu-*, if the three verbs are in fact connected. More important, the point is proved by a new reading by Hawkins (based on a collation of the photographs and the original) of the last part of KARATEPE (Meriggi LXX and LXXI). The text has: POST-*na-wa/i* ARHA (CRUS) *ta₄-za-tu ara/i-zi* OMNIS-*mi-zi á[+x]-za-ti-wa/i-tà-sa á-ti-ma-za* (DEUS) LUNA-*sa-wa/i* (DEUS) SOL-*há REL-𐎶 á-ti-ma-za CRUS-i*, 'Let the name of Azatiwatas continuously stand for all ages as the name of the Moon and the Sun stands'. The context makes the interpretation of (CRUS) *tazatu* clear beyond doubt: the form is an imperative from *taza-*, the 'iterative' from *ta₆-* 'to stand'; the simplex occurs in the second part of the sentence. The Phoenician version, which uses a single verb where the Hier. has two, confirms this interpretation: *𐤏𐤓𐤌𐤍𐤕 𐤕𐤌𐤍𐤕𐤍𐤕𐤍𐤕 𐤕𐤌𐤍𐤕𐤍𐤕𐤍𐤕 𐤕𐤌𐤍𐤕𐤍𐤕𐤍𐤕 𐤕𐤌𐤍𐤕𐤍𐤕𐤍𐤕𐤍𐤕*, 'Nur der Name 𐤕𐤌𐤍𐤕𐤍𐤕 möge bestehen

¹⁴⁹ This was pointed out by Bossert, *Orientalia* 29 (1960), 432. It is also worth noticing that, if the connection between Cun. Luw. *azza-* and Hier. *á-za-* is accepted, it follows that in Hier. too *-z-* may derive from an original affricate; this does not imply, of course, that the affricate was always preserved as such or that *-z-* always represented an affricate.

in Ewigkeit wie der Name der Sonne und des Mondes'¹⁵⁰. Thus we seem obliged to recognize the existence of a *-za-* iterative suffix. Once more we do not want to speculate too far, but the position seems to be oddly similar to that of Hittite, where, as we know, there are two so-called iterative suffixes *-šk-* and *-šš(a)-* (e.g. in *pešk-* and *ešša-*). In Cun. Luwian and in Hier. it is normally maintained that the equivalent of Hitt. *-šk-* is *-(s)a-*; should we argue that the equivalent of Hitt. *-šš(a)-* is Hier. *-za-*?¹⁵¹. The point can only be suggested, not proved, but we may notice that in one instance at least we have a clear correspondence between Hitt. *-šš-* and Hier. *-z-* (though, admittedly, here we are speaking of a phonetic correspondence and not of morphologically equivalent suffixes). There is little doubt that the same Proto-Anatolian root accounts for the Hitt. *aššiḫa-* 'to love' and for e.g. the first element of the compound name *á + LITUUS-za-ti-wa/i-tà-sa* (Phoen. *ʔztwd*: see above 2.3.7.2.) The same *aza-* element appears in the prince name *TONITRUS-hu-na-á + LITUUS-za-sa* i.e. *Tarhun-azas*, 'the Beloved of Tarhunās', for which we have a much later Greek transcription *Τροκοναζας*¹⁵².

4.6. Before we can reach a conclusion we must consider the impact of the new readings on the lexicon of Hier. Luwian. We shall choose a few lexical items for consideration and shall quote side by side the current and the new transcription.

a) **a-i-ā-/a-i-a-/a-i-*, 'to make'. Read *i-zi-ḫa-/i-zi-i-/i-zi-*. The problems caused by this verb have been mentioned before¹⁵³. There is no doubt that the new reading severs a link with Luwian which seemed highly satisfactory¹⁵⁴. Here we can only repeat that this is the one occasion in which the new readings do not bring Hier. closer to Cun. Luwian and that the breaking of this link rests on the reading of not one but two signs (cf. 2.3.3.3.). It may also be pointed out that not all is clear apropos of Cun. Luw. *aḫa-*. If, as is generally accepted, this is an equivalent of Hitt. *iḫa-*, and if, as it seems, the Hitt. form goes back

¹⁵⁰ The translation is that of Donner and Röllig, *KAI*², II 37–38.

¹⁵¹ There is an immense literature about the two iterative suffixes of Hittite; for the basic references cf. Kronasser, op. cit. (in n. 121), 575ff. (*-šk-*), 549ff. (*-šš(a)-*); W. Dressler, *Studien zur verbalen Pluralität* (Vienna 1968), 159ff. (*-šk-*), 211ff. (*-šš(a)-*). It does not seem possible to argue that Hitt. *-šš(a)-* derives from *-šk-*, and it is worth pointing out that the two suffixes vary enormously in productivity: *-šk-* is fully productive, while *-šš(a)-* is not.

¹⁵² See Houwink ten Cate, op. cit. (in n. 142), 127 and 235; Laroche, *Noms*, 176, no. 1264 compares with *Τροκοναζας* the cuneiform *aḫ-za*. Probably related is the name of the Malatya's king *Tar-hu-na-zi* (Laroche, *Noms* no. 1265), which may be compared with the Cilician name *Pytr'nz* (i.e. **Piya-tarhun-azi*), attested in an Aramaic text from Egypt (see Houwink ten Cate, op. cit., 128).

¹⁵³ See above 2.3.3.3.

¹⁵⁴ The evidence for Cun. Luw. *aḫa-* is listed by Laroche, *DLL*, 24, but perhaps the clearest examples of this verb have become known after the publication of *DLL*: cf. especially *KBo* XIII 260.

to an original **iē*- root, the initial *a*- of Cun. Luw. cannot descend from *i*- and must be treated as a Cun. Luw. peculiarity¹⁵⁵. The correspondence we might well expect for **iē*- is *i*-, and at this stage it is conceivable that *izi*- provides evidence for the expected *i*-¹⁵⁶; if so the *-z*- element could be treated as equivalent to the *-šš*- element of Hitt. *ešša*-, the well known iterative of *iā*-. Once more this remains an hypothesis; it has the merit of showing that a form *izi*- is not impossible¹⁵⁷.

b) [†]*a-ma*. Read *i-ma*. The word occurs in the phrase REL-*i-sa-pa-wa/i i-ma* REL-*i-sa* CAPUT-*i-sa* 'whatsoever man . . .' of KARAHÖYÜK 11. The new reading makes clear the connection with the well known Hittite phrase *kuiš imma kuiš*; it is unfortunate that there is no obvious Cun. Luw. equivalent, since the meaning of *im-ma* (listed by Laroche in DLL, 51) is not clear¹⁵⁸.

c) [†]FINES *a-ra/i-hi*-, 'border, frontier, outside limit'. Read *i-ra/i-hi*-. On all readings it is likely that the word is an *-i*-stem since the Nom. pl. (KARATEPE 163) ends in [†]*-hi-i* (i.e. *-hi-zi*). Because of its meaning it has been identified with the Hitt. *arḫa*- 'Grenze, Gebiet'. However, Hittite also had a form *irḫa*- of the same word, and this agrees with our new reading, once the usual change of an *-a*-stem into an *-i*-stem has been taken into account¹⁵⁹. Moreover Cun. Luw. *irḫatt*-, glossed as 'série, circle' by Laroche (DLL, 52) is an obvious parallel and seems to show the same stem¹⁶⁰.

d) [†]SOLIUM *a-sà-nu-wa/i*-, 'to seat, to cause to sit'; [†]THRONUS *a-sà-tar-tá*- 'throne'. Read *i-sà-nu-wa/i*-, *i-sà-tara/i-tá*-. The meanings of these words are

¹⁵⁵ For the forms of *iā*- attested in Old Hittite cf. Kammenhuber, *Handbuch* 186; for the observation that Cun. Luw. *a*- cannot correspond to Hitt. *i*-, see Kronasser, op. cit. (in n. 121), 73f.

¹⁵⁶ For the *i* treatment of **ē* see below under d).

¹⁵⁷ Cf. above 4.5.3. for the suggested equivalence between Hitt. *-šš(a)*- and Hier. *-z(a)*-; in this particular case an additional problem would arise because of the *-zi/-zi-ia*- alternation in *i-zi/-zi-ia*-; however, it would not be too difficult to suggest that the *-z*- suffix was redetermined with a *-iā*- extension.

¹⁵⁸ Cf. Bossert, *AfO* 17 (1955), p. 70, n. 43, where, however, he incorrectly interprets this element as enclitic "mich(?)".

¹⁵⁹ According to *communis opinio*, *irḫa*- is the older form and *arḫa*- represents an Hittite innovation (cf. e.g. Kronasser, op. cit. in n. 121, 24 with the earlier references). More recently, Laroche, *RPh* 42 (1968), 246f. has argued that the Hittite evidence proves that *arḫa*- is the earlier form and *irḫa*- an innovation. From our point of view this is not as relevant as the obvious agreement with Cun. Luw. *irḫatt*-.

¹⁶⁰ There is, of course, the related problem of the preposition normally transcribed *arḫa* (Meriggi, *Glossar* 30f.; Laroche, *HH*, p. 120). However, this is normally written logographically or semi-logographically, so that it seems purposeless to discuss its phonetic shape. Even if it were proved that the correct reading is indeed *arḫa*, this would only point for Hier. to a situation very similar to that of Hittite, which had near a form *irḫa*- of the noun, a form *arḫa* of the preposition. There is no Cun. Luw. evidence for the latter form. In our transcriptions we have always used ARḪA in capitals to indicate the logographic nature of the sign used for the preposition.

clear and there is no doubt that they are both built on the same root. It is worth pointing out that in all their occurrences they are written with initial Π . Traditionally, the words have been connected with the root of Hitt. *eš-* 'to sit', *ašešanu-* 'to seat'. The new readings certainly do not speak against these connections. We are not yet clear about the continuation of IE *e* in Luwian, though in a number of cases it appears as *a*. However, the position of IE *ē* need not have been the same; an *-i-* treatment is equally likely. For Hier. this is supported by at least two different forms: the first is *tī*, 'thou', of the ASSUR letters (g II 20), which must go back to an earlier **tē-* (cf. also Hitt. *zik*); the second is *nī*, 'not', which will be discussed below (in j). That the root of Hitt. *eš-* is connected with an earlier **ēs-* form seems certain, in view of the obvious comparison with e.g. Gr. *ἵσταί*, Skt. *āste*; if so, *is(a)-* is the Hier. equivalent that we expect¹⁶¹.

e) †MANUS *a-sà-tar-a* (Dat. sg.). Read *i-sà-tara/i-i* (i.e. *istari* or *istri*). The Anatolian word for 'hand' has been known for a long time; it appears in Hitt. as *ke-e-eš-šar*, in Cun. Luwian as *iššari-*, in Lycian as *izri-*. It has often been pointed out (most recently by Laroche, *RHA* XXIII/76 [1965], 43f.) that the Hier. word is related to the Hittite and Cun. Luw. forms. Laroche starts from a Proto-Luwian **isari-* which loses the intermediate vowel and acquires an epenthetic *-t-* between the sibilant and the liquid¹⁶². The explanation is obviously correct, but we still have to account for the lack of the initial velar (from IE **gh-*) in Cun. Luwian and Hier. It is well known that there is in Luw. evidence for a change of Proto-Anatolian **ki-* (or **gi-*) to *i-*, but since the initial velar was only lost before a palatal vowel, this could not have happened before *-a-*. Laroche here is obliged to appeal to his polyphonic *e* value of Π ;

¹⁶¹ The logograms SOLIUM and THRONUS (respectively *HH*, nos. 299 and 294) introduce other words which have traditionally been taken as related. There is, on the one side, a verb SOLIUM + *MI-* 'to sit, to stay', with a substantive SOLIUM + *MI-ia-sa*, and on the other side, a substantive (THRONUS. SOLIUM) *á-sa-sa* with a verb (SOLIUM) *á-sa-tá*. The meaning of *á-sa-tá* (a hapax) is obscure; the noun (THRONUS. SOLIUM) *á-sa-sa* indicates a sort of desirable possession. In the case of SOLIUM + *MI-* it is impossible to speculate about the reading of the verb since the attempts of Laroche (*HH*, p. 154) and Meriggi (e.g. in *Glossar* 37) to attribute to SOLIUM a phonetic value *asa* or *as* do not seem to have sufficient evidence in their favour; in any case the obvious interchange of SOLIUM and Π , and of a barred form of SOLIUM and Π in KARATEPE speak only for the values *i* and *ia* of SOLIUM. We are certain about the reading of the noun *á-sa-sa*, but we cannot know whether the word is or not connected with the root of *i-sa-nu-*, since we are not entirely clear about its meaning. However, if *á-sa-sa* and *i-sa-nu-* were indeed connected we would have to reckon with an ablaut alternation similar to that attested in Hitt. *eš-/ašeš-*. Once more, we may point out that in the same word we never find alternations of Π and *á/à*.

¹⁶² It is not easy to see why we should reconstruct a Proto-Luwian **isari-* rather than **isri-* (< **ghesr-*). Cun. Luw. *iššari-* could have acquired its internal *-a-* after the common Luwian period. For the noun cf. also M. Scheller, *IF* 69 (1964), 41 and for the change *-sr- > -str-* see Neumann, *Die Sprache* 11 (1965), 82ff.

we find that our reading *i* solves the problem without invoking polyphony and at the same time brings the word closer to its Cun. Luw. counterpart.

f) [†]*a-wa*: KULULU I 6 B. Read *i-wa/i* (i.e. *iwi*). This is certainly a verb in the 1st. pers. sg. present; a meaning 'I shall go' seems suitable in the context, and this offers an obvious parallel with Cun. Luw. *i-* 'to go'¹⁶³.

g) [†]*i-ha-nu-wa-*, a causative verb. Read *za-ha-nu-wa/i-*. The verb occurs twice in the final curse of KARGAMIS A 1 a 6, where it is preceded by *ā-tā*¹⁶⁴. The current transcription does not yield any parallel in Cun. Luwian or Hittite; the new reading makes it possible (though not certain) to connect the verb with Hittite *zaph-*, 'schlagen'.

h) [†]*i-ā*: personal name (Dat.) in CEKKE rev. 3¹⁶⁵. Read *za-za-ia*. A name *Zaza-* with a Dat. *Zazaia* seems intrinsically more satisfactory than a name *Īi-*.

i) [†]*i-la*, an adverbial form in KARGAMIS A 6, 5. Read *zi-la*. The new reading produces a form identical to the Cun. Luw. adverb/particle *zi-la*. This is translated by Laroche (*DLL*, 115) as 'désormais', but a strengthening particle (such as Lat. *quidem*) would be equally possible in the contexts in which it occurs—as it is in the Hier. text (see Meriggi, *WZKM* 53 [1957], 222).

j) [†]*nā-a/nā-a*, 'not'. Read *nī-i/nī-i*. This is the only negative particle of Hier. and fulfills the function of Hitt. *natta* and *lē*, of Palaic *nī* and *nīt*, and, within the Luwian group, of Cun. Luw. *nawa* and *niš* and Lyc. *ne* (*neu*, *nepe*) and *nī* (*nipe*). Both transcriptions offer plausible forms; if we accept the reading *nī*, we are probably dealing with an original **nē* (which is also likely to account for the *nī-* forms of Cun. Luwian, Lycian and Palaic). This may well owe its long vowel

¹⁶³ In BOYBEYPINARI III D 2 the same verb seems to recur (in the 1st. pers. sg. preterite) in the phrase ARHA (PES₂) *i-hā* (cf. KULULU loc. cit. ARHA *i-wa/i*); for the reading see Hawkins, *An. St.* 20 (1970), 84 and 92. In KARATEPE 181 we may read (PES₂) *i-u-na* and recognize (with Bossert, *Orientalia* 30 [1961], 322) the infinitive of the same verb. The meaning 'to go' is guaranteed by the context and by the Phoenician version. Cun. Luwian may offer evidence for a similar infinitive if it is possible to derive from it the *-hi(t)-* abstract *i-ū-na-(a)-hi-ša* which is listed among the qualities and parts of the body which may be affected by magic power (see *DLL*, s.v.). The meaning could have been something like 'capacity to go, to move'. For the *-ša* particle which is, as usual, added to these neuters see above 4.2.2.2.

¹⁶⁴ In Meriggi, *Glossar* 67 [†]*i[-h]a-nū-wa-tu* is a misprint for [†]*i[-h]a-nū-wa-tu*.

¹⁶⁵ In CEKKE rev. 3 we read (after collation by Hawkins) two personal names in the Dat., each preceded by the man determinative: [†]*la-pa+ra/i-na-ia* [†]*za-za-ia* 'to Labarna and to Zaza'. The same name *Zaza-* also appears in one of the clay bullae from Korucutepe recently published by Güterbock, *JNES* 32 (1973), 143 figs. 3-4. The bulla belongs to the Empire period (13th. century) and contains the central part of a hieroglyphic seal. The central group consists of the personal name [†]*i-i-ā*, i.e. *za-za-ā*; the sign [†] has no bottom strokes, as we expect in the Empire (for the final *ā* see above n. 93). In his commentary Güterbock remarks on the oddity of the reading *ia* and on the possibility of accepting Bossert's values for this name.

to the influence of IE *mē*, which is not preserved in Anatolian. For other examples of **ē* > Hier. *i*, see above d).

k) [†]*par-a* (Meriggi) = AVANT-*a* (Laroche): a preposition (= *ex*, *ab* according to Laroche, *HH*, no. 14). Read the final sign as *-i*. The new reading brings the preposition closer to Cun. Luw. *pari*, so that we can recognize in Hier. both the Luw. forms *pari* and *paran* (cf. for the latter [†]16-*na* Meriggi = [†]AVANT-*na* Laroche).

l) [†]*pi-ā-a-ā-*: a personal name in the Dat. (KULULU lead strips: 1 a 2)¹⁶⁶. Read *pi-ia-i-ia-*. Our reading offers a form which is intrinsically more plausible than that yielded by the current transcription.

m) [†]4-*i*, [†]9-*i*, [†]9-*wa-a-i*. Read 4-*zi*, 9-*za*, 9-*wa/i-i-za*¹⁶⁷. These numerals, with their phonetic complements, can be compared with the Cun. Luw. numerals 4-*zi* (cf. Laroche, *DLL*, 70 and add a reference to *KBo* IX 145, 6) and 9-(*un*)-*za* (*DLL*, 125).

5.1. A brief summary is now in order. Our short history of the decipherment of the Hieroglyphs shows that, in spite of the solid body of knowledge that has now been acquired, there is still scope for further research and further reappraisal of the work already done. Any new piece of evidence may alter substantial parts of what we know or think we know. Seen from this angle, it becomes clear why a group of 'digraphic' documents, recently excavated, obliged us to reopen the question (already tackled by Bossert and others) of the values of \updownarrow and the related sign \uparrow . \updownarrow and \uparrow also require discussion. In the course of our inquiry, epigraphical and orthographic considerations led us to challenge the traditional transcriptions *i*, *i*, *a*, *ā* of \uparrow \updownarrow \updownarrow \updownarrow , and to attribute to these signs the values *zi*, *za*, *i*, *ia*. It then became necessary to test the new values against the evidence of the grammar and the lexicon. From our short survey it emerges that the new readings make it possible to explain a number of grammatical phenomena which could hitherto only be labelled as oddities unparalleled in the rest of Anatolia. At the same time the new readings bring the grammar of the language much closer to that of Cun. Luwian and, up to a point, of Lycian than had been suspected. From an examination of the lexicon it also emerges that here too there is much to be gained in the way of new interpretations. However, there is one loss to register; where the current transliterations offered a verb [†]*a-i*-(*a*-) or [†]*a-i-ā-* 'to make' (which could be compared with Cun. Luw. *aia-*) we read *i-zi*-(*i*-) or *i-zi-ia-*. The old reading,

¹⁶⁶ Laroche (*apud* Özgüç, op. cit. in n. 41, p. 115) lists the form [†]*Pi-ā-ā-ā-*, but the photograph confirms that the second *-ā-* is a misprint for [†]*a-*.

¹⁶⁷ 9-*za* occurs in KARGAMIS A 1 a 2, where this reading, which is that of Gelb and Meriggi (cf. *Glossar* 165), is certainly preferable to the reading [†]*i-nu*, where the sign for '9' is given its phonetic value and read after \updownarrow . 9-*wa/i-i-za* occurs in KARGAMIS A 13 d 4, where Meriggi (*ibid.*) seems to read 9-*za* only.

though at first sight satisfactory, seems now untenable in view of the other evidence produced, and we shall have to explain the different formations of Cun. Luwian and Hier. as being due to one of those lexical disparities which are common even in very similar dialects. It seems impossible to ignore the solid evidence afforded by the new 'digraphic' documents and by a very satisfactory series of grammatical and lexical interpretations in order to retain a single lexical equivalence.

5.2. In this paper we have made extensive use of the internal evidence of the Hier. texts and of their obvious correspondences with Cun. Luwian and Lycian. When the other languages of the Luwian sub-group were silent, we have sometimes been obliged to consider the Hittite evidence too. However, we have refrained as far as possible from using etymological explanations based on Indo-European reconstructions which were less than certain. The comparative grammar of Anatolian has still to be written, and in the present circumstances it seemed best to exploit above all the evidence which was geographically and linguistically nearer to that of our texts. Yet, though there is much that is still obscure in the study of Anatolian languages, during the last twenty years the joint efforts of a number of scholars have at least served to establish one fact beyond doubt. While Hittite, Palaic and Lydian remain somewhat on one side, Cun. Luwian, Lycian, and the language of the Hieroglyphs share a special relationship which allows us to speak of a Luwian sub-group of Anatolian. It is our hope that, if these new readings are accepted, we may come somewhat closer to an understanding a) of the similarities and the differences between the languages (or dialects) of the Luwian sub-group; b) of the development which took place within the sub-group itself in the course of the second and first millennia B.C.























| 1 | 2 | | Mittel- berger | Laroche | Meriggi |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------------|-----------------------------|
|  | | <i>i</i> | <i>a</i> | (209) <i>a/e</i> | (171) <i>a</i> |
| |  | <i>ī</i> | | (299/1) <i>ā</i> | (250) <i>a₄</i> |
|  | | <i>ia</i> | <i>ā/ya</i> | (210) <i>ā</i> | (172) <i>ā</i> |
| |  | <i>ia</i> | | (299/2) <i>ā</i> | (251) <i>ā₄</i> |
| |  | <i>ia</i> | | (379) <i>ā₄</i> | (272a) <i>a₅</i> |
|  | | <i>zi</i> | <i>i</i> | (376) <i>i</i> | (387.1) <i>i</i> |
| |  | <i>zī</i> | <i>i₄</i> | (313) <i>ī</i> | (325) <i>i₄</i> |
| |  | <i>zī</i> | | (336) <i>i₅</i> | (330) <i>ī</i> |
| |  | <i>zi₄</i> | <i>i₅</i> | (128) <i>i₆</i> | (125) <i>i₆</i> |
|  | | <i>za</i> | <i>ī</i> | (377) <i>ī</i> | (387.2) <i>ī</i> |
| |  | <i>zā</i> | <i>ī</i> | (335) <i>ī</i> | (329) <i>ī</i> |
| |  | <i>zā</i> | | (336) <i>ī₅</i> | — |
| |  | <i>za₄</i> | <i>ī₆</i> | (112) <i>i₄</i> | (106) <i>i₅</i> |
|  | | <i>nī</i> | <i>nī</i> | (214) <i>nā</i> | (203) <i>nā</i> |
|  | | <i>nī</i> | <i>nī</i> | (411) <i>nā/nī</i> | (388) <i>na</i> |
|  | | <i>si</i> | <i>si</i> | (174) <i>sā</i> | (174) <i>sa</i> |
|  | | <i>wa/i</i> | <i>wa/i</i> | (439) <i>wa/wi</i> | (394) <i>wa</i> |
| |  | <i>wā/i</i> | | (165) <i>wā</i> | (147) <i>wā</i> |
| |  | <i>wā/i</i> | | (166) <i>wā</i> | (315) <i>wā</i> |
|  | | <i>ra/i</i> | <i>ra/i</i> | (383) <i>ra/ri</i> | <i>r.</i> |
|  | | <i>tara/i</i> | <i>tara/i</i> | (389) <i>tar</i> | (370) <i>tar</i> |
|  | | <i>?</i> | | (378) <i>si(??)</i> | (272) <i>ś₂</i> |

Table 1. List of modified readings employed in this paper, with readings of Mittelberger, Laroche and Meriggi for comparison.

1. Principal signs
2. Rare signs, deriving their values from alternation with the principal signs.















































| | | | |
|----------|-------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|
| ANNUS |  | MANUS |  |
| AVIS |  | MONS |  |
| AVUS |  | OMNIS |  |
| BONUS |  | OVIS |  |
| CAELUM |  | PANIS |  |
| CAPUT |  | PES |  |
| CERVUS |  | PONERE |  |
| CORNU |  | POST |  |
| CRUS |  | PUER |  |
| DARE |  | PUGNUS |  |
| DEUS |  | REGIO |  |
| DOMINUS |  | REX |  |
| DOMUS |  | SCRIBA |  |
| EQUUS |  | SOL |  |
| FINES |  | SOLIUM |  |
| IRA |  | TERRA |  |
| IUSTITIA |  | THRONUS |  |
| LITUUS |  | TONITRUS |  |
| LONGUS |  | URBS |  |
| LOQUI |  | VAS |  |
| LUNA |  | VIA |  |
| MAGNUS |  | VIR |  |
| MALUS |  | VIR |  |

Table 2. Logograms with Latin transcription

Indices

Whenever possible we have quoted the words listed in the index in transcription rather than transliteration and we have listed the stem-forms of nouns and verbs rather than their inflected forms.

Cuneiform Hittite

anzas, anzel 37
ape 36
arha 45
arha- 45
ašešanu- 46
aššiṣa- 20, 44
eš- 46
ešša- 44f.
hardu- 6
haršallant- 43
ḫe-/ḫa- 16, 45

Ibri-Šarruma 13
imma 45
Ini-Tešub 13
irha- 45
ke 36
keššar 46
laman 31
lē 47
Mira 20
Mizramuwa 18

Mukšu- 11
natta 47
pai 38
šarazzi 40
šiwatt- 40
-šmaš 37
šummanza 33
dai 38
Tudhaliṣa- 18
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zik 46

Cuneiform Luwian

āṣa-/aṣa- 16, 44
annarumahi- 32
Annimassani- 26
anza 37
apa- 35
arai- 30
ara/i- 30
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awi- 6, 23
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harmahi- 28
hattaramšan 33
Hattušaya (dat.) 10, 28
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irhatt- 45
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maššani- 26
muwai 38
Nananta- 41
Naniṣanza- 41
nawa 47
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pašihahha 6
parattanza 32f.
pari 48
-ša 33
šarlattanza 32
tappašanti- 39
tappašša- 11
Tarhunza 39
tarušanti- 33
tarušša 33
tāti- 26

Tauriṣizza- 41
tiyammanti- 39
Tiwaz 40
ulanteya (dat.) 10
unza- 37
ura-, urant- 41
ušši- 41
uwaniyati 28
uwarannahiša 32
uza- 37
za- 35
Zarnizza- 41
Zidanta- 41
Zidanza- 41
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ziti- 19
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MU.KAM-iš 26
ḫU-aš 40
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Hieroglyphic Luwian

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ami- 22, 30f., 36
amiḡati- 22f., 28
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anzi- 36
apa- 24, 31, 35
apan-ha 31
apasi- 23, 29, 32
aritalasi- 38
asa- 46
asiḡa- 20
asu- 26
Astuwatimanzasi 29
Atanawani- 38
atiman- 31, 34
awi- 23
aza- 42
Azatiwata- 20f., 44
Azatiwataḡa 16
-ha 6
halḡa 30
haniḡata- 30
Halparuntiḡa- 40
hapaza- 42
harmahasi- 27
harmahi- 27f.
harmisanza 34
Harnawani- (URBS) 23
harnisanza 29, 34
hartu- 6
hawī- 26
huha- 26, 27f.
Ia, Iḡa- 13, 16
ima 45
Imatu- 15
Ini-TEŠUP 13
Ipari-ŠARRUMA 13
irhi- 45
isanuwa- 46
isataranta- 46
Iskar-Tispas 13
istari- 46
iuna 47
iwi 47
izi-/iziḡa- 16, 37, 44
izistai 38
Kakaja (dat.) 10
Kamani- 27
Kanapu- 10, 26
Karkuha- 27f.
Karkamisa- 5
Karkamisiza- 38
karpantahisa 31
Katuwa- 28
ku-AVIS-pa-pa- 10, 27f.
Kurkuma- 5, 11
Kurkumawani- 5
laliḡa 30
Ma (REGIO) 20
Malizi- (URBS) 20, 40
man 5
masani- 26f.
-maza 37
mi- 22, 36
mijati 22
Mira (REGIO) 17
Mizra- 20
Mizramuwa- 18
-mu 22, 36
Muksa- 11
Muti- 10
muwai 38
Nakitiḡawani- 38
ni 46f.
nimuwanza- 38
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pa- (pron.) 35
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pasan (dat.) 29
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sanawi- 39
sarlatanza 32
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Tarhunt(i)- 39
Tarhunza- 22, 26, 39
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tarpi- 22
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taruti 32
tarwinaza- 43
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taza- 43
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tipasa- 11
tipasanti- 39
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Tiwati- 40
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waliḡaza- 43
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Warpalawi- 11
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Zaza- 47
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zitiḡanti- 42
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9-za 48
9-winza 48

Hieroglyphic-Luwian Logograms

| | | |
|--------------------------|---------------------------------------|--------------------------|
| ARHA 45 | IRA(-)sa-lá-sa- 42f. | PONERE-wa/i- 38 |
| AVUS-há- 27f. | IUSTITIA-na-ti 22, 30 | PUGNUS(-)lá-mi-tà-ia- 30 |
| BONUS-mi- 22 | IUSTITIA-ni-ti-i 22 | REL-à-za 24, 34 |
| BONUS-si/-sa 29 | LITUUS 20 | REL-i- 24, 34 |
| CAELUM-si- 38 | LONGUS + ra/i-ia 30 | REL-ia-ta 10 |
| CAPUT-ta- 27 | LOQUI-há-ri-i-ti 30 | REL-i-zi 34 |
| CAPUT VAS-ru-ti 32 | LOQUI-ha-ti- 30 | REX-hi-sa 31 |
| CERVUS-za- 40 | LOQUI p]á-ra/i-ta ₄ -za 33 | REX-na 3 |
| DARE-i 38 | MAGNUS + ra/i-ia 39 | REX-tá-za 26f. |
| DEUS ka + ra/i-hu-ha- 27 | MAGNUS + ra-nu-wa/i- 37 | REX-ti-ia-ri + i 30 |
| DEUS ku-AVIS-pa-pa- 27 | MAGNUS + ra/i-za- 38f. | SCRIBA(-)la-li-ia- 30 |
| DEUS-na-ri + i 30 | MALUS ha-ni-ia-ta- 30 | SOL-wa/i-ti-i-na 40 |
| DEUS-ni/nì- 23f., 27, 42 | MALUS-za 33 | SOL-wa/i-za-sa 40 |
| DOMINUS-ia- 27 | MONS tu 18 | TONITRUS-hu-ta- 26, 39 |
| DOMINUS-na-ni- 27 | OMNIS + MI-ma- 30 | TONITRUS-hu-za- 22, 38f. |
| DOMUS-na- 30f., 34 | PES-á-wa/i- 23, 37 | VIA-wa-ni- 37 |
| HALPA-ru-ti-i-ia- 40 | PES-wa/i-za- 43 | VIR-ti-ia-ta- 42 |
| IRA-lá-za- 42 | PES REL-ia- 10 | VIR-zi 17 |

Obelized Transcriptions

| | | |
|-----------------------------|--------------------------|----------------------------------------|
| †a-i-a/ā-16, 19, 44 | †á-wa- 23 | †ma _x -li-i (URBS) 19f., 40 |
| †a-i-sa 37 | †DEUS-ná/nà(-a)-i(-a) 24 | †mi-i-ra 20 |
| †a-ma 45 | †ha-pa-i-ni-wa- 42 | †mi-i+ra-muwa 17 |
| †a-ma-tu 15 | †ha-wa-a-sa 26 | †ná-a/nà-a 47 |
| †a + ra/i-hi- 45 | †i- 39 | †par-a 48 |
| †a-sà-nu-wa/i- 46 | †i-a-ti 30 | †pi-ā-a-ā- 48 |
| †a-sà-tar-i 46 | †i-ha-nu-wa- 47 | †Tar-hu-i-sa 39 |
| †a-sà-tar-ta- 46 | †i-i-ā 47 | †tá-ti-a-sa 26 |
| †á + si-i-ti-wa-tà/rá/i- 21 | †i-la 47 | †ti-wa- 23 |
| †á-ti-ma-i- 31 | †i-nu 48 | †u-i-sa 37 |
| †a-wa 47 | †i-sa 35 | |

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| | | |
|------------|------------------|-----------------|
| Atānazi 41 | mahāi 26 | Plezzijeheje 10 |
| ebe 36 | Mañmahaje 10, 28 | prñnezi- 41f. |
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| hrzzi 40 | ne 47 | Surezi 41 |
| izri 46 | ni 47 | |

Assyrian

| | | |
|-------------|------------|---------------|
| Amat- 15 | Hamat- 15 | Qalparunda 40 |
| Gurguma- 11 | Milidia 40 | |

Phoenician

| | | |
|------------------|----------|--------|
| ʔthwd 16, 20, 44 | mlk 31 | mps 11 |
| ʔthwdy 16 | mmlkt 31 | |

Aramaic

grgm 11

mlz 19, 40

pytr^cnz 44

Hurrian

e-ia-an 13, 16

ey 13, 16

Urartian

aqarqi 11

terusi 11



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